

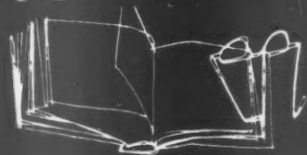
November 1958

SCHOOL MANAGEMENT

PRACTICAL SOLUTIONS TO SCHOOL MANAGEMENT PROBLEMS

G

A BASIC
EDUCATION
FOR ALL
STUDENTS



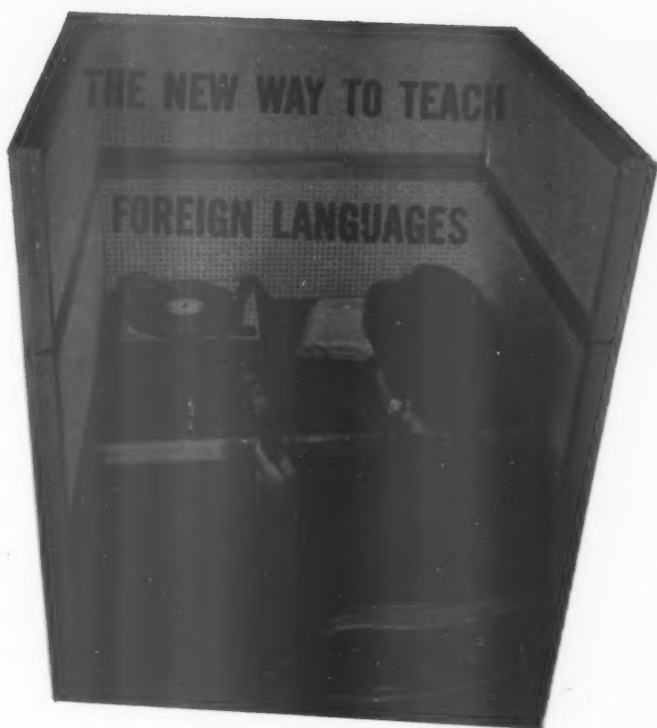
REMODELLING

ADDING TO

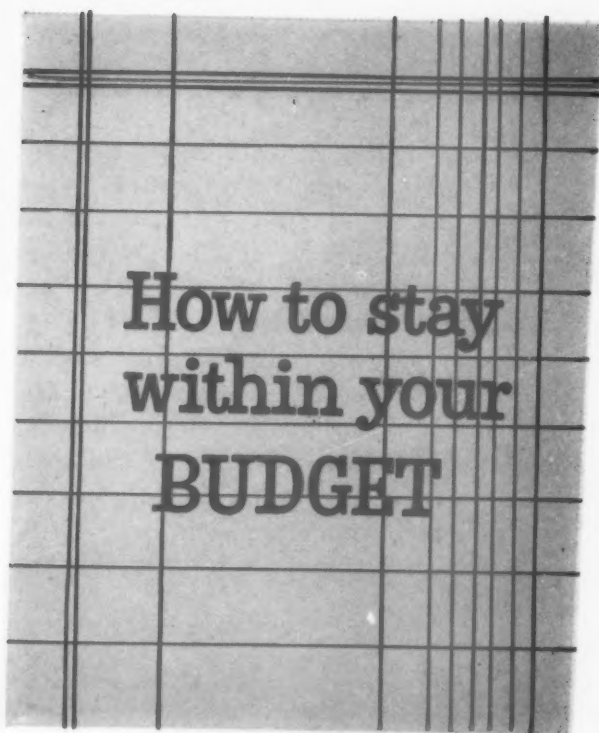
OLDER BUILDINGS

THE NEW WAY TO TEACH

FOREIGN LANGUAGES



How to stay
within your
BUDGET



SEE COMPLETE CONTENTS ON PAGE 3

Ætna Drivotrainer makes it possible to TRAIN MORE STUDENT DRIVERS . . . BETTER AT LOWER COST PER PUPIL

ONE TEACHER TRAINS 15 STUDENTS AT A TIME in this modern Drivotrainer classroom. Each "car" is equipped with the instruments and controls of a real automobile. The system employs motion pictures to simulate actual driving conditions and a master control records each student driver's actions — both correct and incorrect.



By combining Ætna Drivotrainer instruction with on-the-road training in dual-control cars, schools have found they can train *more pupils with the same teaching staff*. While the exact figure will vary with the number of students to be trained, the efficiency of scheduling, and the size of the installation, a school using this combination course can train up to 50% more students per teacher per year and save up to 30% in cost per pupil.

In addition, research indicates that this training method can be considerably more effective than dual-control cars alone in teaching *safe driving habits and the handling of emergency situations*.

For further data on the Ætna Drivotrainer, write to:

Information and Education Dept.



**ÆTNA CASUALTY
AND SURETY COMPANY**

Development of the Drivotrainer was financed by the Ætna Casualty and Surety Company as a contribution to education, and highway safety.

Ætna Casualty has no financial interest in the sale of Drivotrainer equipment but continues its public service support of the program through production of Drivotrainer films and other teaching aids, assisting in teacher training, and supplying an educational liaison service to Drivotrainer users.

Drivotrainer equipment is manufactured, sold and serviced by the Automatic Voting Machine Corp. of Jamestown, N. Y.

Affiliated with Ætna Life Insurance Company • Standard Fire Insurance Company • Hartford 15, Connecticut

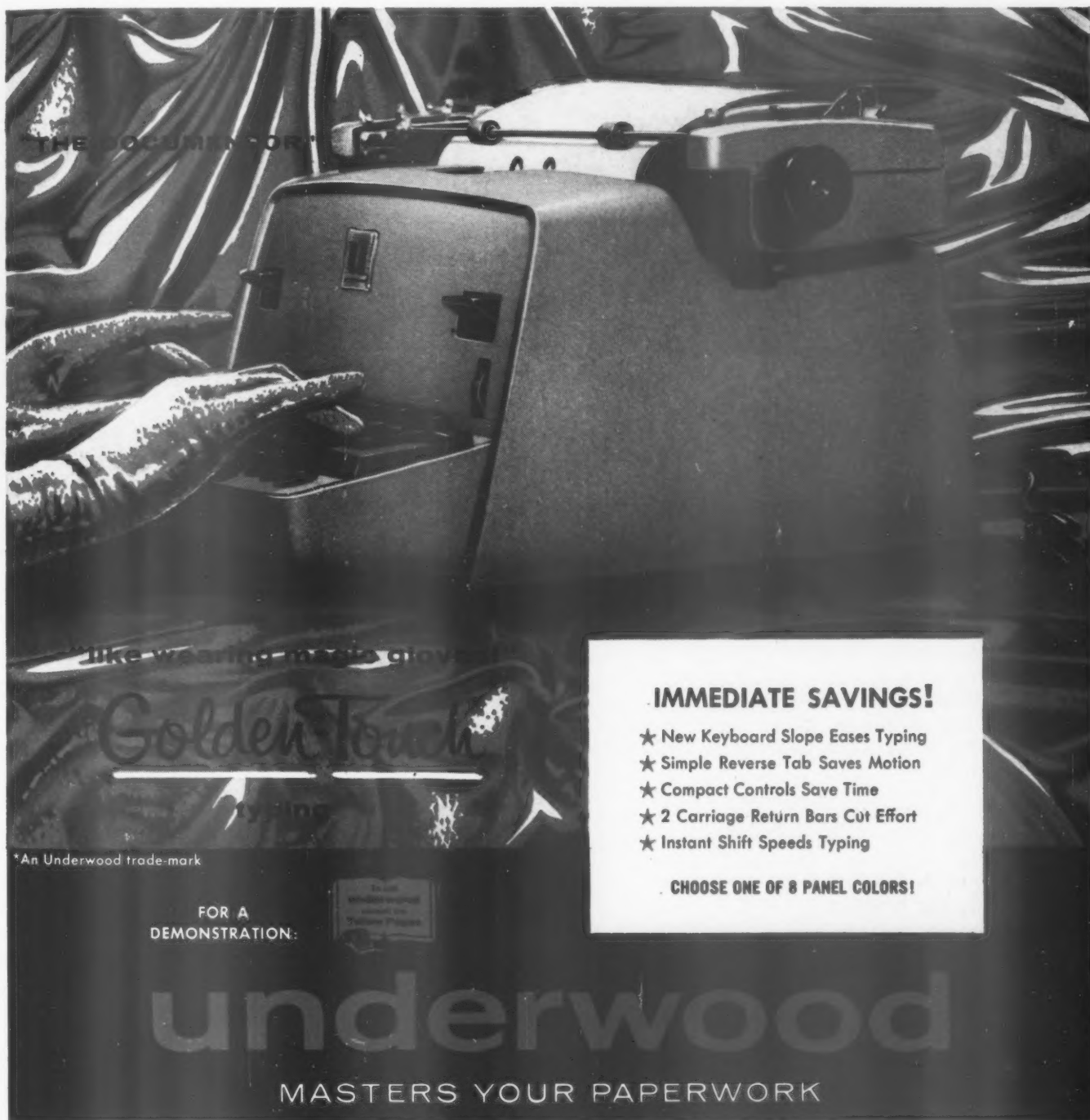
(Circle number 738 for more information)

1959 Golden-Touch Electric—by underwood

New "Floating Keyboard" helps stop typing strain!

Much typing strain comes from holding hands up at the keys. This *Floating Keyboard* is sloped to reduce fatigue. It keeps keys low, brings them close, centers controls. There's less hand-travel than on any other keyboard.

You choose your own type style with the new Golden-Touch DOCUMENTOR.* Keys are cup-shaped for easier *electric touch*. Impression control insures print-perfect copy—sharp carbons. Symbols (+ = ! °) add versatility. Try it soon!



THE DOCUMENTOR

Like wearing magic gloves!

Golden-Touch

typing

*An Underwood trade-mark

FOR A DEMONSTRATION:

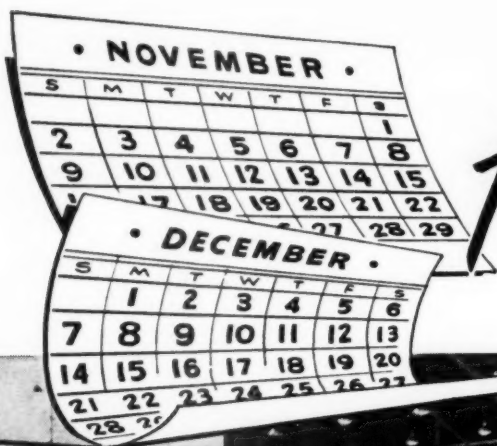
underwood

MASTERS YOUR PAPERWORK

IMMEDIATE SAVINGS!

- ★ New Keyboard Slope Eases Typing
- ★ Simple Reverse Tab Saves Motion
- ★ Compact Controls Save Time
- ★ 2 Carriage Return Bars Cut Effort
- ★ Instant Shift Speeds Typing

CHOOSE ONE OF 8 PANEL COLORS!



Hillyard

HELPS YOU USE
THE HOLIDAYS TO CATCH
UP ON FLOOR CLEAN-UP



HOLIDAYS give you a break, for floor renewal. With the right planning, these free days are enough time to bring your gym floor into top condition for the basketball season.

This is also your chance to re-condition foyers, corridors, classrooms, shower and locker room floors, midway in the long year of hard use.

For most effective planning, call in your Hillyard "Maintaineer®". He'll be glad to survey your floors, make practical suggestions, recommend treatment techniques and materials for each floor and floor problem.

*The Hillyard "Maintaineer®" is
"On Your Staff, Not Your Payroll"*

ST. JOSEPH, MO.
PASSAIC, N. J. SAN JOSE, CALIF.



Branches and Warehouse Stocks in Principal Cities

FREE

HILLYARD PLANNING HELPS

E-Z Marker for laying out free-throw circles
Gym Floor Blueprint File for laying out, lining, finishing
How to Plan File for favorite sports layouts

The Hillyard Maintaineer is a recognized specialist in school floor care. His services are freely available without charge or obligation. Mail the coupon today!

HILLYARD St. Joseph, Mo.

E-6

☐ Please give me the FREE Hillyard Helps shown above.

☐ Please have the Hillyard Maintaineer in my area call to help me with my holiday clean-up planning.

Name

Institution

Address

City State

(Circle number 723 for more information)

SCHOOL MANAGEMENT

Contents for November 1958

Features

- The new way to teach foreign languages** 24
Forget the way you learned French, Spanish or German. Something new has happened that promises faster teaching at lower cost with fewer trained teachers.
- Remodelling and adding to older buildings** 27
There's more to an "addition" than tacking-on extra classrooms. An experienced architect provides four case histories of successful conversions and additions.
- Guaranteed: A liberal education for all students** 33
All high school students in Raleigh, N. C., study fundamental courses first, take fringe courses second. The result: A phenomenal record of academic achievement.
- Explorations in education** 38
Reports from local schools on science teaching, driver training, acceleration for gifted children and counseling in junior high school.
- How to chart your school budget** 42
A school board member suggests a simple method his district has used to make sure that it is not using more money than it has budgeted.
- How to save money on maintenance** 51
What items in a school should be bought for quality instead of price? Here's one way to decide: Joint planning sessions with architects, staff, custodians and citizens.

Short Reports

- What is a costly palace?** 15
Things your public ought to know about the real cost of constructing schools.
- School-park cooperation saves district money** 46
Spend less and get more is the recipe followed by Lombard, Ill.

Departments

- | | | | |
|--|-----------|----------------------------------|-----------|
| Letters to the editor | 10 | Thought starters | 59 |
| <i>A sampling of correspondence crossing the editor's desk</i> | | <i>A monthly review of ideas</i> | |
| | | Press releases | 70 |
| | | <i>News from business firms</i> | |
| News of the schools | 21 | Reader service section | 72 |
| <i>A digest of current happenings</i> | | | |

Now Honeywell quality



Making schools better is this man's job!

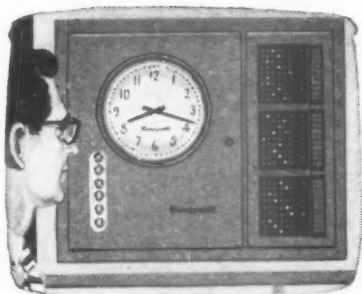
He's the Honeywell man who works closely with your architect and builder to see that your Honeywell systems are properly applied and installed. His responsibility never ends, because he, and thousands of Honeywell men like him, are ready to give you instant, expert service from 112 service offices—as close as your phone.



Visit the AASA EXHIBIT, Atlantic City, Feb. 14-18

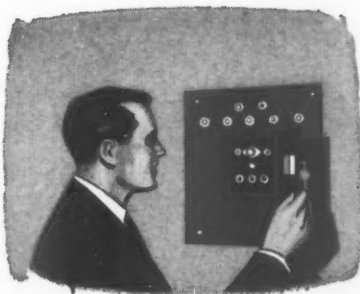
ity and service back three

school operational systems



Honeywell Clockmaster Systems

- Provide handsome clocks in 9", 12", 15" or 18" dials, flush or surface mounted.
- Simplified link-chain programming. Easy to read, understand, set. Trouble-free.
- Optional spring-reserve power unit. Keeps master clock running during power failure.
- Signal duration easily varied. Surface switch permits signal duration 2 to 25 seconds.



Honeywell Fire Detection and Alarm System

- Locates fire by numbered light.
- Reports fires automatically both within building and to local fire station.
- Transmits alarms even with break or ground in detection circuit.
- Operates on stand-by battery in case of power failure.

*Trademark



Honeywell Light-Saver*

- Phototubes and control panel automatically turn lights on and off as needed to supplement daylight.
- Tests prove savings as high as 80% on lighting bills.
- Helps teacher use natural lighting to fullest advantage.
- Honeywell helps with application and installation.

These Honeywell systems for the school have been developed as a result of Honeywell's long and thorough appreciation of your school's operational needs. They are designed to permit better education by providing the finest in system facilities for school plants.

Now with the Honeywell systems shown on this page your school gets the special benefits that only Honeywell can give: 1) your school management benefits from simplified operational functions; 2) your student body benefits from a better, more flex-

ible learning environment; and 3) your taxpayers benefit from the performance and durability of quality products tailored to fit your school's particular needs. In addition Honeywell offers the most comprehensive maintenance program in the industry—periodic inspections, emergency service and the replacement of worn equipment. For more complete details on any of Honeywell's systems for schools, call your local Honeywell office or write Minneapolis-Honeywell, Dept. SM-11-156, Minneapolis 8, Minnesota.

Honeywell



First in Control

(Circle number 729 for more information)



Bowling Alley and Meeting Room—Crossroad Lanes, Inc.—Peoria, Illinois
Architect: Leslie Kenyon & Assoc., Peoria, Illinois

You can't hear a "pin" drop ~ when this FOLDOOR is closed

On one side of this Dual Sound Retardant FOLDOOR is a league meeting room . . . on the other, a bowling alley. Yet this FOLDOOR installation is so successful that private parties in the league room are undisturbed by bowling alley noises.

When the room is not engaged for meetings, the sound-absorbing FOLDOOR partition is folded back . . . adding space for other uses. It's a profitable arrangement that helps FOLDOOR quickly pay for itself in commercial applications.

Actually, this new type FOLDOOR cuts sound transmission more effectively than any other fabric covered folding door. Impartial tests *prove* it! Anywhere *you're* planning double-use facilities, either new or remodeled, you'll be space and money ahead with the new Holcomb & Hoke Dual Sound-Retardant FOLDOOR.

Call your nearest FOLDOOR distributor now—or write direct for complete details. The cost is probably much less than you think.

HOLCOMB & HOKE MFG. CO., INC.
1545 Van Buren Street • Indianapolis 7, Indiana
In Canada: Foldoor of Canada Ltd., Montreal 26
Installing distributors in all principal cities



(Circle number 724 for more information)

SCHOOL MANAGEMENT

22 West Putnam Ave., Greenwich, Conn.

Publisher
Jerome W. Harris

President
William S. Kline

EDITORIAL STAFF

Editor: Jerome W. Harris
Managing Editor: Paul Abramson
Departments Editor: Alice Honore Drew
Art Director: Laurence Lustig
Editorial Assistant: Carol Schlossberg
Production Manager: Joan Longnecker
Advertising Prod. Mgr.: Nelda Green

BUSINESS STAFF

Business Manager: Edwin D. Kline
Circulation: Marie M. LaGuardia

Advertising Offices

New York 141 East 44th Street, MU 7-0583 Director of sales development: Gil Hand—Harrison M. Rollins—Sherman P. Laire

Chicago 612 North Michigan Avenue, Del 7-0112 Western Division Manager: William S. Hutchings Western Advertising Manager: Alfred A. Spelbrink—John Hynes

Los Angeles The Robert W. Walker Co., 730 South Western Avenue, Dunkirk 7-4388

San Francisco The Robert W. Walker Co., 57 Post Street, Sutter 1-5568

Houston Ralph Runnels, 5210 Morningside Drive, Jackson 4-6633



A publication of
SCHOOL MANAGEMENT MAGAZINES, INC.
22 West Putnam Avenue, Greenwich, Conn.
Townsend 9-8585

President and Treasurer, W. S. Kline; Vice President, J. W. Harris; Vice President, A. J. Kaiser; Secretary, E. D. Kline.

SUBSCRIPTIONS: In United States and Possessions, one year \$8.00. Canada, one year \$10.00. Foreign subscriptions \$12.00. Single copies \$1.00. When possible, tearsheets of articles will be provided at a cost of \$.50 for each article requested, to cover costs of handling.

GROUP SUBSCRIPTIONS: when ordered in groups of three or more, subscriptions are \$6.00 each. **Note:** please give title and address for each subscriber. Board members generally prefer to receive their copies at home address.



Member of Business
Publications Audit

Copyright 1958 by School Management Magazines, Inc. Published monthly by School Management Magazines, Inc., 22 West Putnam Ave., Greenwich, Conn.

CHANGE OF ADDRESS: To insure continuous service, send your new address (and moving date) 45 days before moving.

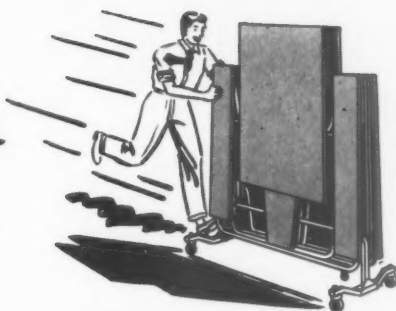
Include old address as it appeared on previous issues (if possible send label from magazine). Do not depend on the post office to forward either the change of address or your magazines.

SCHOOL MANAGEMENT

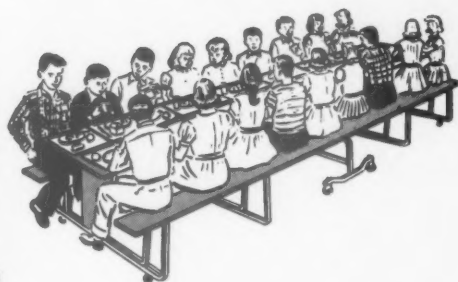
"Where do we eat?"



"Right here, kids!"

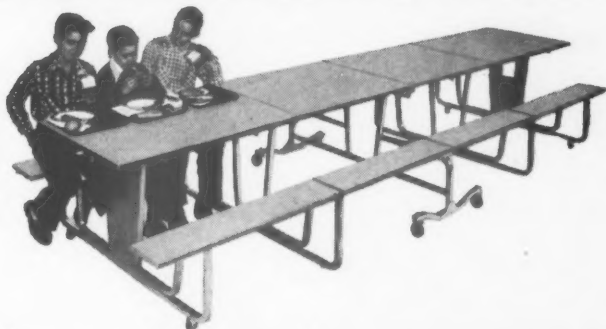


"Mmm-mm!"



Solve your seating for eating problem with larger 12 ft. or 14 ft. portables

They wheel where you need them for immediate use. Here's maximum capacity (for up to 24 youngsters per table) with minimum storage area needed. Seating for eating for up to 240 youngsters (10 - 14 ft. portables) stores in only 4½ by 10 ft.!

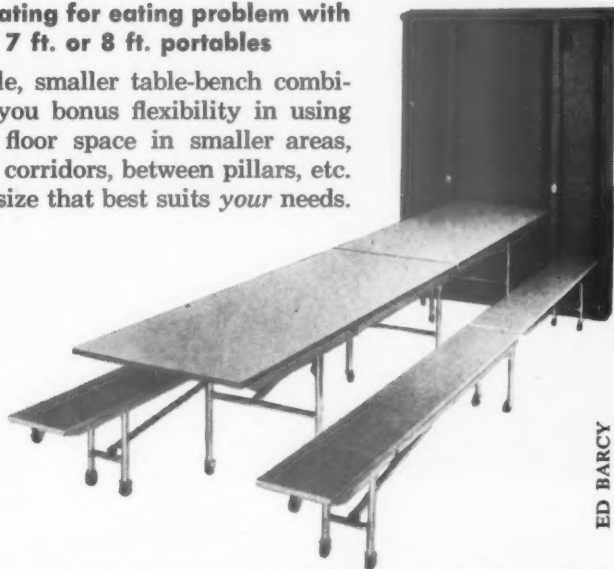


Solve your seating for eating problem with smaller 6 ft., 7 ft. or 8 ft. portables

These versatile, smaller table-bench combinations give you bonus flexibility in using all available floor space in smaller areas, such as along corridors, between pillars, etc. We have the size that best suits *your* needs.

Solve your seating for eating problem with wall-type tables with benches

Ready for instant use at the touch of a lever, thanks to automatic hydraulic action... these tables store away in the wall or on the wall...out of the way. No separate storage area required. Tables may be used without benches for adult meetings, etc.



ED BARRY

Let us show you how the Haldeman-Homme complete line of Fold-A-Way lunchtables with benches can help you achieve maximum utilization of your multi-use room

VISIT US IN ATLANTIC CITY
A.A.S.A. Feb. 14-18
Booths 1429, 1431, 1433, 1435
(Downstairs)

HALDEMAN HOMME MFG. CO.

Dept. SM-11, 2580 University Ave. • St. Paul 14, Minn.

Midway 5-6465

Gentlemen: Please send further information on your Fold-A-Way:

☐ 12 & 14 ft. Portables ☐ 6, 7 & 8 ft. Portables ☐ Wall-type Tables

I'm also interested in:

☐ Portable Stages ☐ Portable Choral Risers ☐ Portable Band Stands
☐ Portable Ping Pong Tables ☐ Portable Banquet Tables

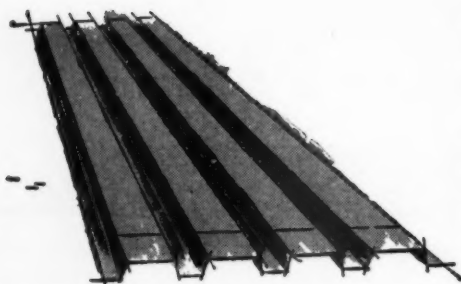
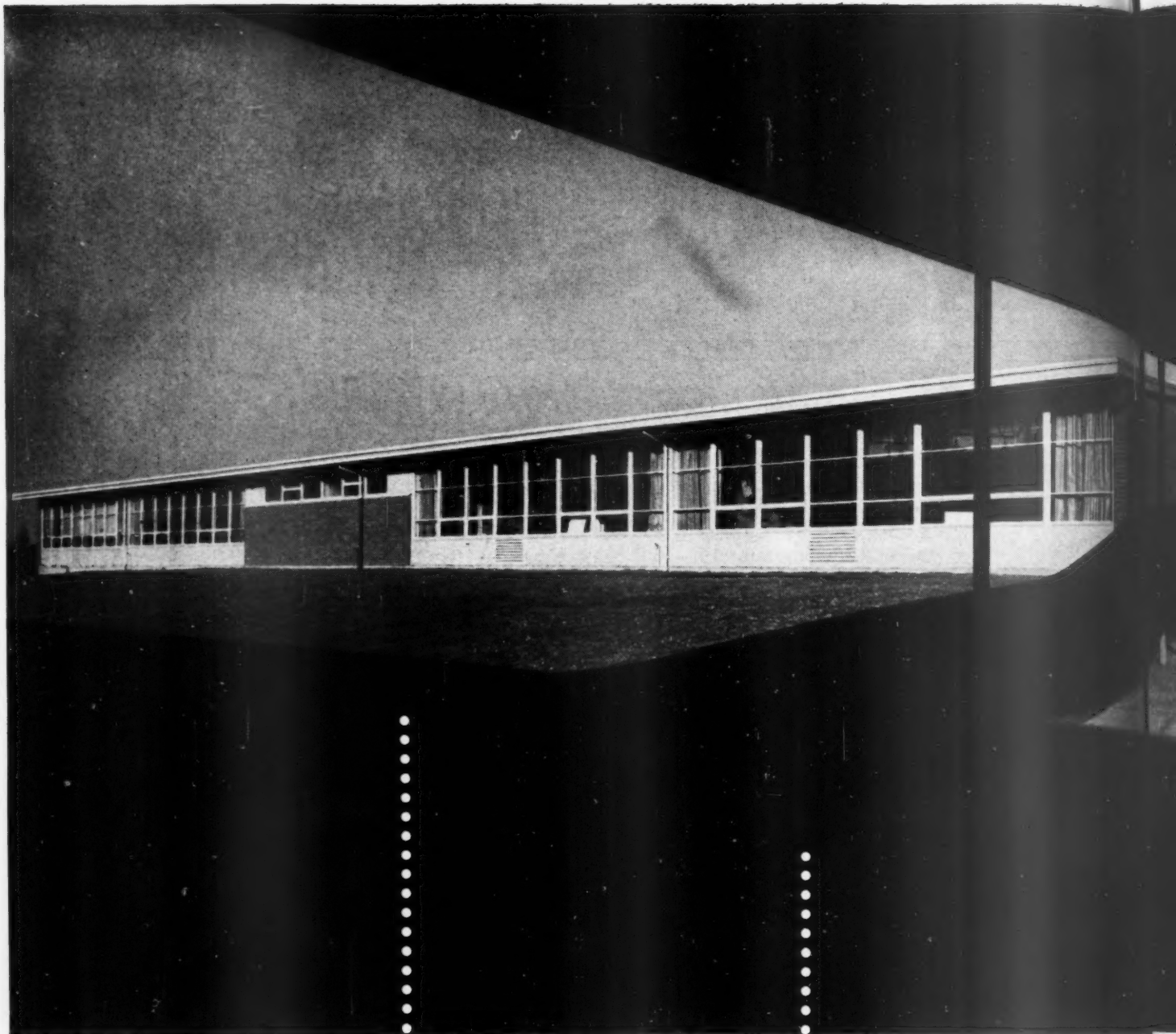
NAME _____ TITLE _____

SCHOOL _____

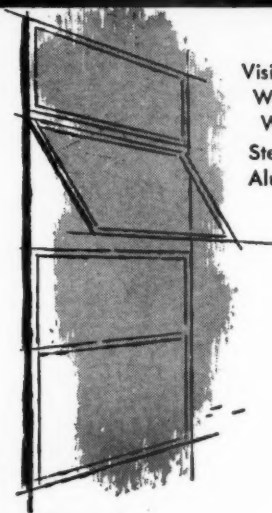
ADDRESS _____

CITY _____ STATE _____

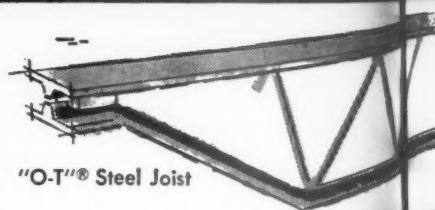
(Circle number 722 for more information)



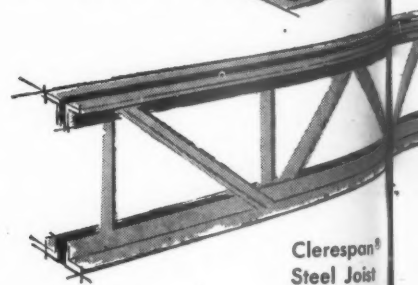
Ferrobord® Steel Roofdeck
24 inches wide



Vision-Vent
Window
Walls —
Steel and
Aluminum



"O-T"® Steel Joist



Clerespan®
Steel Joist



...names you

BUILD LOW-COST SCHOOLS THAT GO UP FAST WITH TRUSCON "GO-TOGETHER" PRODUCTS

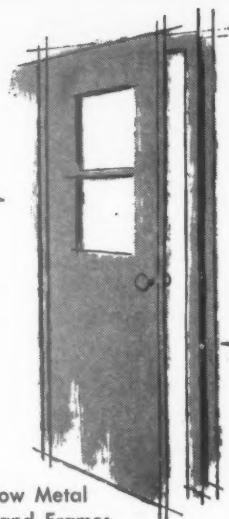
Here's an efficient type of construction which has been developed by architects working with Truscon to achieve low-cost school design. This special adaptation of standard Truscon products has the added advantage of fast school erection and occupancy.

This method lets you take advantage of the speed and economies of off-site construction. The flexible design is based upon your use of economical, readily available standard steel building products—Truscon Vision-Vent® Window Walls, Clerespan® and Open Truss Steel Joists, Ferrobord® Steeldeck Roofing, Truscon Steel Doors and Frames, Truscon Reinforcing Products.

As presently utilized, the design is flexible with the use of either a 9' 0" module or a 16' 0" module to allow best economy with Steel Joists and Ferrobord Roofdeck. Clerespan Joists and "O-T" Steel Joists are designed to meet local code requirements for loading conditions.

Simplified construction methods and modular design provide a permanent high-quality building that will be an asset to any community. This is Class A construction using fire-safe materials. Vision-Vent panels can be in the color of your choice. Expansion possibilities protect against obsolescence.

Truscon will be happy to work with school officials, architects, and builders in varying the basic concept to meet local traditions and customs.



Hollow Metal
Doors and Frames

can build on

REPUBLIC STEEL TRUSCON DIVISION

FREE BOOKLET gives details. Send coupon for your copy.

**REPUBLIC STEEL CORPORATION
TRUSCON DIVISION
DEPT. C-6627
1146 ALBERT STREET • YOUNGSTOWN 1, OHIO**

Please send booklet, "Truscon Metal Building Products For Low-Cost School Construction."

Name _____ Title _____
Firm _____
Address _____
City _____ Zone _____ State _____

(Circle number 731 for more information)

**Good vision vital
to good learning**



Bausch & Lomb SCHOOL VISION TESTER

Speeds your visual health program

Good vision is vital to scholastic achievement. The Bausch & Lomb School Vision Tester provides fast, reliable measurement of visual performance—identifies the 4 out of 10 pupils in need of visual attention—makes possible a complete, streamlined visual health program.

Compact, easily portable, the instrument requires only 2 x 2 feet of space on a small table near an electrical outlet.

Complete range of professionally approved Massachusetts type tests administered by one person in 2 minutes. No previous experience required. Write for illustrated brochure H-629: Bausch & Lomb Optical Co., Dept. V-8, Rochester 2, N. Y.

FREE!

**Included
with brochure:**

Professionally approved 5" x 7" plastic Classroom Vision Demonstrator for school nurse teachers.



BAUSCH & LOMB



(Circle number 710 for more information)

How To Lose Good Teachers

(School Management presents below a series of excerpts from the New York Times and from a file of correspondence directed to our attention. We think they are self-explanatory. Ed.)

TWO CLIPPINGS

"Prospects for establishing Russian language courses in the nation's high schools in the next few years were held yesterday to be poor because of a 'critical' lack of qualified teachers."—*N. Y. Times*, June 22, 1958

"The New York State Education Department is planning to help provide more foreign language courses in elementary schools. . . .

"The committee, appointed by Dr. James E. Allen, Jr., state commissioner of education . . . recommended more language instruction, including Russian . . .

"While state officials expected that more elementary schools would want to start language courses, they said the scarcity of teachers was a restricting factor." —*N. Y. Times*, August 30, 1958

THE CORRESPONDENCE

(The writer of the following letter holds a Master's Degree in Russian from Middlebury College and another Master's from Columbia University's School of Slavic Languages, also in Russian. This letter provoked a chain of correspondence, part of which is reproduced below.)

March 24, 1958

DR. WILLIAM B. VIALI, CHIEF
BUREAU OF TEACHER EDUCATION
AND CERTIFICATION
ALBANY, N. Y.

Dear Dr. Viall: I am writing to you in hopes of obtaining a provisional teaching certificate both as a substitute teacher and as a language teacher. For a long time I have hoped that our secondary schools would teach Russian and now that there is such an interest in Westchester County, I am most anxious to qualify for teaching . . .

I am a graduate of the Rye High School, Rye, N. Y., have my BA from the University of Michigan, 1943, majoring in English and Russian; an MA from Middlebury College, Russian Summer School, 1948, and an MA from Columbia University 1949, in the Department of Slavic Languages. The

registrars of these schools are sending transcripts of my records directly to you for evaluation. I would appreciate knowing what I must do in order to qualify for the Teacher's Certificate. . . . I have done private tutoring . . . interpreting, translation and editing and my spoken Russian is good.

. . . now that our children are in school I am especially interested in seeing our New York school system expand the scope of its teaching to include Russian and hope that I may participate in this effort.

Would you be good enough to reply as soon as possible because plans for this coming year must be made now.

Thank you for your attention . . .

MRS. GENE SOSIN
RYE, N. Y.

August 12, 1958

SCHOOL MANAGEMENT
GREENWICH, CONN.

Dear Sir: I think the enclosed letter will be of interest to you [see above] . . . It was sent on March 24 and I had hoped for a reply in time to register for graduate work in education this summer at Columbia University. I have not yet heard from Dr. Viall (chief, bureau of teacher education and certification) nor have I even had an acknowledgement of receipt of my letter and the transcripts . . .

It is most frustrating to know that I have the ability to teach a subject which is so much in demand at present and am thwarted in my attempt to qualify under the regulations of the state school system, although I have been accepted as a teacher in several colleges.

I might add that there is one school in Westchester County that will be teaching Russian in the fall and, presumably, there will be others following suit in the near future. None of these superintendents can accept me even provisionally without the necessary documents from the state education department and now it looks as if I must wait at least another year . . .

MRS. GENE SOSIN
RYE, N. Y.

August 14, 1958

DR. JAMES E. ALLEN, JR., COMM.
STATE DEPARTMENT OF EDUCATION
ALBANY, N. Y.

Dear Dr. Allen: We are attaching photocopies of a file of correspondence

received from a reader of our magazine who apparently has had [difficulty in receiving teacher certification information]. The writer obviously suggests that we publish this "story." . . . I would like to hear from you, in case there are mitigating circumstances.

JEROME HARRIS, EDITOR
SCHOOL MANAGEMENT

August 20, 1958

SCHOOL MANAGEMENT
GREENWICH, CONN.

Dear Sir: In Commissioner Allen's absence from the office, I am taking the liberty of acknowledging receipt of your letter dated August 14 and of assuring you that I shall endeavor to secure an answer to the questions which you raise.

HUGH M. FLICK, EXECUTIVE ASSISTANT,
STATE DEPARTMENT OF EDUCATION,
ALBANY, N. Y.

August 28, 1958

SCHOOL MANAGEMENT
GREENWICH, CONN.

Dear Sir: In further reference to your letter of August 14, I have had the staff of our office of teacher education and certification report on the status of Mrs. Sosin. I find there is a six-month backlog of correspondence in the division of teacher certification, a situation which we are making every effort to eliminate. . . .

In the meantime, Mrs. Sosin's case has been singled out for evaluation and I am confident that she will hear from the division in the near future.

HUGH M. FLICK, EXECUTIVE ASSISTANT,
STATE DEPARTMENT OF EDUCATION,
ALBANY, N. Y.

September 8, 1958

MRS. GENE SOSIN
RYE, N. Y.

Dear Mrs. Sosin: Kindly excuse the extended delay in our reply.

For the permanent certificate in Russian you would have to complete the 18 semester hours in professional education as outlined on page three of the enclosed bulletin outlining requirements for certification in academic subjects.

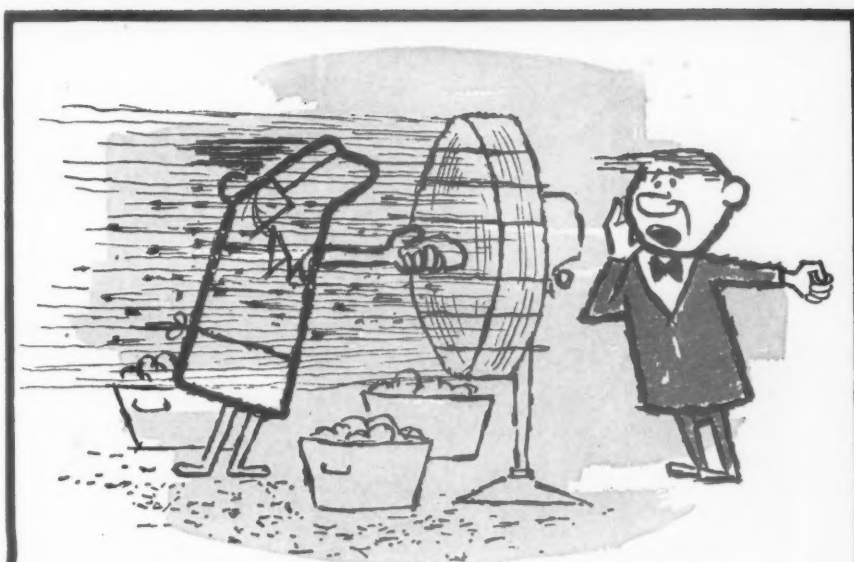
FRED KERSHKO, EDUCATION AID,
STATE EDUCATION DEPARTMENT
ALBANY, N. Y.

POSTSCRIPT

(This ad appeared in the help wanted columns of the Rye paper in September.)

Substitute teacher applications are desired by the Rye Neck Public School for elementary and high school substitute teachers. Please write to Supt. of Schools, 734 E. Boston Post Rd.

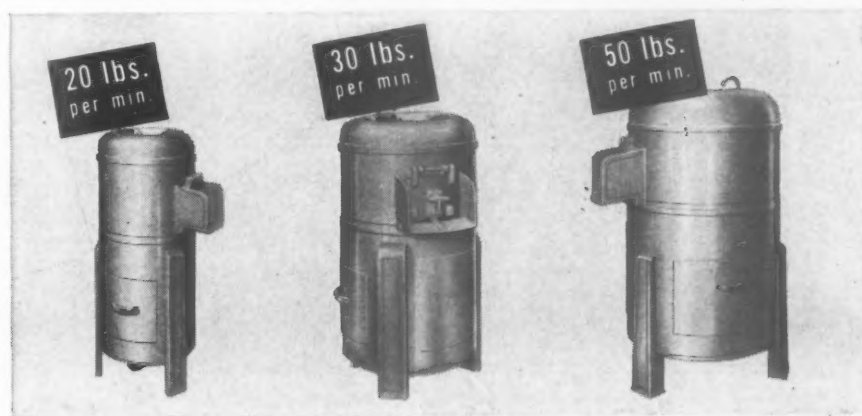
NOVEMBER 1958



*BUT FELMLEY, DON'T YOU THINK A
BLAKESLEE PEELER WOULD BE MORE PRACTICAL?*

**BETTER BUY
BLAKESLEE**

Speed up production and save on costly man hours with a Blakeslee "No Gear" Peeler. By removing only the thin outer skin, Blakeslee Peelers make possible a 20% saving in potatoes and vegetables, as compared to hand peeling . . . with more food value and flavor retained. Designed with an abrasive side wall in the peeling chamber, as well as an abrasive peeling disc, it provides faster, more efficient peeling and eliminates what is commonly known as "flats". The "No Gear" design assures quiet operation and does away with expensive, inconvenient gear replacement. Streamlined throughout permits easy and thorough cleaning. Write for complete information and specifications.



Blakeslee also manufactures quality Dish and Glass Washers, and Food Mixers for every size of operation.

G. S. BLAKESLEE & CO. Department 1140
1844 S. Laramie Ave.
NEW YORK • LOS ANGELES • TORONTO CHICAGO 50, ILL.

(Circle number 711 for more information)

the vital element in planning



East Side School, Niles, Mich. Edward R. Duffield, A. I. A., Niles, Mich.

A CHOICE OF WALL SYSTEMS TO SUIT YOUR BUILDING AND YOUR BUDGET

Shown above is a Kawneer Unit Wall, the pre-engineered, pre-fabricated wall system. It is only one of many Kawneer wall systems designed for schools. They range from standard-engineered systems that are pre-cut and pre-fabricated, to precision-engineered, custom pre-fabricated systems. Each has its own particular advantages for certain types of buildings. That includes the price.

tin new school is the PUPIL

there's a cost benefit gained by allowing your architect to plan for the pupil's good . . . he can eliminate most of your maintenance problems, too.

You can't calculate pupil reaction and future maintenance on a cost per square foot outline.

But your architect can calculate them both—in his design. Many of them can accomplish wonders in these two areas.

This design effort to influence the pupil's behavior has produced some unusual results. School boards have found that students no longer engage in casual acts of vandalism. They like their new schools too well to mark them up. The bright and warm porcelain colors—such as those found on the panels of Kawneer Colorwall and Unit Wall—help

make school an interesting, friendly place, instead of factory-like. And school personnel find that students study better in the bright, open atmosphere of modern design.

The same modern materials that influence the student's behavior enable the architect to virtually eliminate maintenance problems, too. For example, some masonry walls are costly to maintain. But a wall of the Kawneer Unit Wall type is almost maintenance-free. Kawneer Unit Wall even stays bright and clean, free of charge, because the elements do all the washing necessary.

But modern materials are tricky, too. Some of them seem similar, but there's a vast difference in performance. Rely on your architect's advice . . . it's his responsibility, and the performance of the materials he specifies means much to his professional reputation.

Kawneer also makes

Porcelain Facings • Zourite and Colorwall
Walk Covers for student protection
K-Louvre for window sun shades



A CHOICE OF ENTRANCES . . .

Here are doors that can withstand those repeated school's-out explosions longer than any other. It's either the Kawneer Wide Stile School Door—a rugged door with a clean, attractive design—or the durable Narrow Stile that's serving in many schools. Both are light; easy for smaller pupils to open and close. Either can be equipped with a Kawneer Panic device. Kawneer has available the widest range of types and colors of doors in the industry. Of course, frames are built of trim Kawneer Narrow Line members, whose lines harmonize with either door.



Modern Schools with Minimum Maintenance
. . . . Another example of the

Kawneer Touch

NEW DU PONT BROCHURE SHOWS...

How waxes containing LUDOX® can add beauty and slip resistance to your floors

Now your floors can have lustrous good looks, yet resist slips and skids. The reason—floor waxes containing Du Pont's anti-slip ingredient, "Ludox" colloidal silica.

Tiny, transparent spheres of "Ludox" in the wax layer exert a snubbing action under pressure of a footstep . . . give sure-footed traction for extra safety. And these waxes bring out the natural beauty of floors as only fine waxes can. Maintenance is easy, too, because scratches and scuffs can be buffed out without rewaxing.

Get all the facts—send coupon for your free copy of the new Du Pont brochure plus names of suppliers of floor waxes containing anti-slip "Ludox." E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Dept., Room N-2533, Wilmington 98, Delaware.



• New full-color brochure shows how particles of anti-slip "Ludox" in the wax layer give extra safety underfoot.

Specify floor waxes containing
Du Pont's anti-slip ingredient,

LUDOX®



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Mail coupon today for your free copy



Please send me the items checked:

- ☐ New full-color brochure on floor waxes containing "Ludox"
- ☐ Names of suppliers of these quality waxes

E. I. du Pont de Nemours & Co. (Inc.)
Grasselli Chemicals Department, Room N-2533 SM
Wilmington 98, Delaware

Name

Firm Title

Address

City State

(Circle number 721 for more information)

THINGS YOUR PUBLIC OUGHT TO KNOW

Basic information that schoolmen can use as a part of a community education program

What is a "costly palace"?

Editor's note: The following letter from Carl B. Munck, president of the National School Boards Association, challenging two articles that were published by the *Reader's Digest*, was released to the press on October 8th. Many SCHOOL MANAGEMENT readers received a summary of it through the courtesy of the NEA which requested permission to use our mailing list in order to obtain maximum national coverage. We felt you would find the full text of the letter (printed below) of value in your community.

MR. DEWITT WALLACE, EDITOR
THE READER'S DIGEST
PLEASANTVILLE, N. Y.

Dear Mr. Wallace: As president of the National School Boards Association I write to protest *The Reader's Digest* continuing circulation of articles about school "palaces."

The latest example of what seems to be a cynical campaign to shake the American citizen's faith in the good sense and integrity of his local school board member who must decide when, where, and how to build schools to service the youngsters of his community, is in the October 1958 issue.

It is timed, interestingly enough, to reach the large *Digest* readership immediately before the peak month for bond proposals to go on the ballot in communities throughout the land.

I refer, of course, to the reprint, exhumed 14 months after its original publication, of an article by Dorothy Thompson called "Must Schools Be Palaces?" In an explanatory box, the *Digest* editor says that Miss Thompson's article and a companion one by Clifton Fadiman called "The Mess in Education" are "reflective of a grass-roots revolt against burdensome taxes for costly new schools."

Our National School Boards Association through its 51 federated state and territorial associations, represents business men, professional men, farmers, plumbers, housewives, and just plain, public-spirited citizens who give up thousands of hours every week to make sure that the tax money entrusted to them by the people of their communities for the schooling of children is spent in the wisest possible manner.

When the *Digest* implies that most school boards are approving of (or being hoodwinked into) building schools which are "crushingly expensive in physical plant maintenance;" that these school boards rate swimming pools, air-conditioning and bowling alleys over a high-quality curricular program, the *Digest* is insulting the integrity, the intelligence, and the devotion to duty of thousands of school board members. Worse, the *Digest* is accusing school board members of negligence and mismanagement of public funds.

Every melodrama must have its villain . . . a wicked ogre or a cruel giant. Apparently in this campaign on

school "palaces," begun more than a year ago, the *Digest* is casting the American school board member as the villain of the piece.

Furthermore, the *Digest* in this campaign is making assumptions about school building costs that are not only at complete variance with the facts, but which run counter to prevailing trends in American society. Let me give you a few examples:

1. The *Digest* implies that the new school in almost any thriving community is apt to be the most luxurious and costly building in town.

Any citizen can prove for himself whether this is true in his own community. All he has to do is to take a look at the new houses, the new office buildings, banks, churches, motels, drive-in restaurants, and bowling alleys. Then he should take a look at the new school. Is it really a "palace" compared to other new buildings in his town?

If he's statistic-minded, he can study recent issues of "Costs and Trends of Current Building Construction," a highly respected publication of *Dodge Reports*, which lists costs of all kinds of buildings. Some examples from recent issues which *Digest* editors wouldn't have to travel far to check:

In Kearny, N. J., a fat rendering plant is being built at a cost of \$25.75 per square foot. Ten miles down the road, in Ridgewood, N. J., an elementary school is being built at a cost of \$18.09 per square foot. In this area, anyway it apparently costs more to build a plant to render fat than it does to build a plant to educate children.

A police headquarters building is going up in Mineola, N. Y. In the adjacent town of Westbury, they are building a bank. The bank will cost \$20.86 per square foot and the police headquarters will cost \$25.00 per square foot. The new high school in Westbury will cost \$19.40 per square foot. Apparently it costs more to build buildings to cash checks and chastise lawbreakers in the Westbury-Mineola area than it does to build a building to educate high school students.

In Lynchburg, Va., a new drive-in restaurant is going up. It will cost \$13.68 per square foot. A new elementary school in Lynchburg, now under construction, will cost \$10.01 per square foot. Which will be more like a palace, judging from this figure—the drive-in or the school?

Syosset, N. Y. will soon boast a new fire house. It will cost \$21.38 a square foot to build. Syosset's new 1,200 pupil junior high school costs \$16.05 per square foot. Efficient firefighting stations are mighty important . . . but so are educational buildings.

Randon examples, you say? Yes—but these are figures from a disinterested fact-finding, business organization, and as such, at least as valid as Miss Thompson's ramblings about "schools I know of."

2. A second serious assumption made by the *Digest* in its campaign is that the classroom teacher is the fall guy for the palace-happy builders. The *Digest* says money which

is going into school buildings should instead be going into teachers' pockets in the form of adequate salaries.

This is a cagey argument which might fool some people. The truth is that the vast majority of school board members want both for their children—topnotch, well-prepared teachers and modern efficient buildings in which these teachers and children can work. And this is what makes the school board's task so difficult—trying to stretch the educational dollar to meet both these essential needs. Furthermore there is evidence of a positive correlation between the expenditures for school buildings and teachers' salaries. Where good and relatively expensive school houses are authorized, there too will be found the board and community that pay the highest salaries.

Isn't it a strange commentary that a country that counts among its famous advertising slogans "Better Things for Better Living" and "Live Modern" would even think of depriving its children of *either* a decent classroom in which to learn or a decently-paid teacher to guide them?

But let's ask a local school board member to comment on this argument that school "palaces" are siphoning money away from teacher salaries. This member, by the way, serves Ardsley, N. Y., a town praised by the *Digest* for the excellence and economy of its school construction. He says:

"If the Ardsley school board had lavishly splurged when the elementary school was built and added 50% to the cost of the building by including such 'frills' as maintenance-free aluminum windows instead of rusting steel windows; maintenance-free vinyl tile instead of high waxing-cost asphalt tile; several teacher lounges instead of one cramped, poorly-equipped cubicle, larger classrooms to take the present bulge of students; a usable-size library instead of the present closet-type; and a built-in public address system for special announcements and emergencies so the principal would not have to spend $\frac{3}{4}$ ths of an hour informing teachers in the far-flung classrooms of an emergency bus schedule change; if the auditorium had been air-conditioned since it is used extensively all year long for all adult as well as summer functions . . . all this could have been included for less than 50% more than the initial cost. This 50% increase in cost would add about \$10,000 a year to the cost of paying for the school (on a 30-year mortgage). Compared to the additional facilities and usefulness, this would have been a bargain.

"Now let's see what this money would do if all of it was put into a wage increase. Of our almost \$1 million 1957 budget, 75% is for salaries. Adding \$10,000 to the \$750,000 brings the salary total to \$760,000. Dividing that by the 110 persons employed by the school, means an average of \$6,909 instead of the present \$6,818 a year. Teachers would hardly consider this compensation for cramped quarters and heavier teacher loads. In this rising economy, a raise of less than 10 to 20% is considered nothing. Last year we gave a 12% raise, with a few of our teachers receiving as much as \$1,200 more."

In addition to paying teachers well, most school board members believe both the teacher and the child can do a better job in well-lighted, well-ventilated, well-equipped surroundings. It is our impression that most modern industrialists feel the same way about their employees.

In fact, the *Digest* itself appears to be a leading exponent of this modern philosophy of employee relations in its own headquarters. The handsome, beautifully-landscaped *Digest* building near Pleasantville is such a showcase that some 400 sightseers a month, according to reports, come to tour it.

When the *Digest's* 2,000-3,000 employees feel the need for a break in the day's occupation, I am told, they can repair to one of the 36 employee lounges thoughtfully provided by the management. Employees may relax in the Pink Shell Room . . . the Japanese Room . . . the South

Sea Room . . . the Fire Station Lounge (for men), or any of the others.

Digest employees can keep up with the news via a public address system which carries special messages and over which visiting celebrities often speak. Music is piped to employees' offices.

A flower arranger comes to the *Digest* twice a week. She arranges flowers in the "Flower Room" where all the necessary tools are conveniently at hand. The culture-conscious *Digest* employee can browse in the tastefully-appointed library, or feast his eyes on the original paintings in the hallways by Modigliani, Van Gogh, Utrillo, and others.

The *Digest* even sees to it that employees get back and forth to work with a minimum of inconvenience. It heavily subsidizes a bus service for employees.

Yes, the *Digest* must be a pleasant place to work. It is odd, in the light of all this concern for the physical well-being of its own employees, the *Digest* can dismiss so lightly the fact that thousands of children go to school in fire-trap buildings, and where the only "lounging" done by teachers might be a quick smoke in the boiler room between classes.

Finally, let us ask ourselves if now is really the time for a campaign of retrenchment in either school facilities or teachers' salaries. If we are engaged, as all the critics of the schools tell us so loudly and so often, in a fierce competitive struggle for supremacy in the field of knowledge, shouldn't we be thinking less about taxes and more about how to provide our children with the finest teachers and facilities that money can buy?

If we decide, in this land where there is enough money for business to produce and consumers to buy the latest improved model of everything from a popup toaster to a sweptwing car, that there is not enough money to educate our children on anything but an austerity standard, why, probably the children and their teachers will go along.

But as a teacher reminds us: "Anybody who feels that the antique firetrap school is a 'mellow' place in which to learn, or that anything better than a blockhouse devoid of gymnasiums, libraries, arts, crafts, and assembly rooms is a satisfactory site for an educational program, should examine his own standards. If his home is barren of anything but sturdy walls and a roof that keeps the rain off; if his car is a stripped-down model of a cheaper make (and several years old); if he travels coach on overnight train trips—then he should shame *all* of us, not just the schools, into living the Spartan life. If not, he should turn his talents towards getting rid of the firetraps and encouraging the building of schools that reflect a community's pride in its children and the importance of the education of that child."

If you are sincerely interested in improving public education in the United States, perhaps you would be available to discuss with me and other leaders of the National School Boards Association ways and means of meeting the educational needs of our youth. I would like to have your response to this invitation.

Sincerely yours,

CARL B. MUNCK, PRESIDENT
NATIONAL SCHOOL BOARDS ASSOCIATION, INC.

Reprints of this article are available through School Management in lots of 100 or more for \$2 per hundred.

Address requests to: Business Manager, School Management, 22 W. Putnam Ave., Greenwich, Conn.



Special activities unit, Westmoor High School, Daly City, Calif., houses gymnasium, auditorium, cafeteria, music room. Architects: Mario J. Ciampi, A.I.A.; Allyn C. Martin, Paul Reiter, associates.

L·O·F visits a high school...

a Seaside Showplace built on a budget

(Less than \$15.00 per sq. ft. despite demands of a stormy site)*



It sits on a California hilltop only a half mile from the sea. From its windows you look down at San Francisco and the Pacific . . . but the building is as breathtaking as the view it commands!

The school's sparkling glass and vivid colors make it as lively as the youngsters who occupy it. And there are wonderful surprises . . . like landscaped courts and window walls everywhere.

Rain, fog and wind swirl around the hilltop site much of the school year. To thwart the elements, Architect Mario J. Ciampi

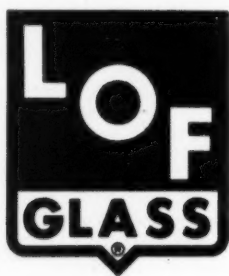
*excluding site work, special equipment, furnishings and fees



Daylighted perimeter hallways surround the classroom unit. L·O·F Heat Absorbing Plate Glass is used for relief from solar heat and sun glare.



Inner mall which separates the special activities unit from the classroom unit has glass walls at both ends to serve as "wind shields" for the protection of those within.



designed a structure enclosing all units around a central mall. This is sheltered from buffeting winds by glass "fences" on either end. Classrooms are in one unit, and special activities areas are in another. Glass-walled perimeter hallways relieve the compactness, affording students a refreshing view.

Do students like it here? Many have gone out of their way to thank Mr. Ciampi. They're proud of the world-wide renown the building has earned.

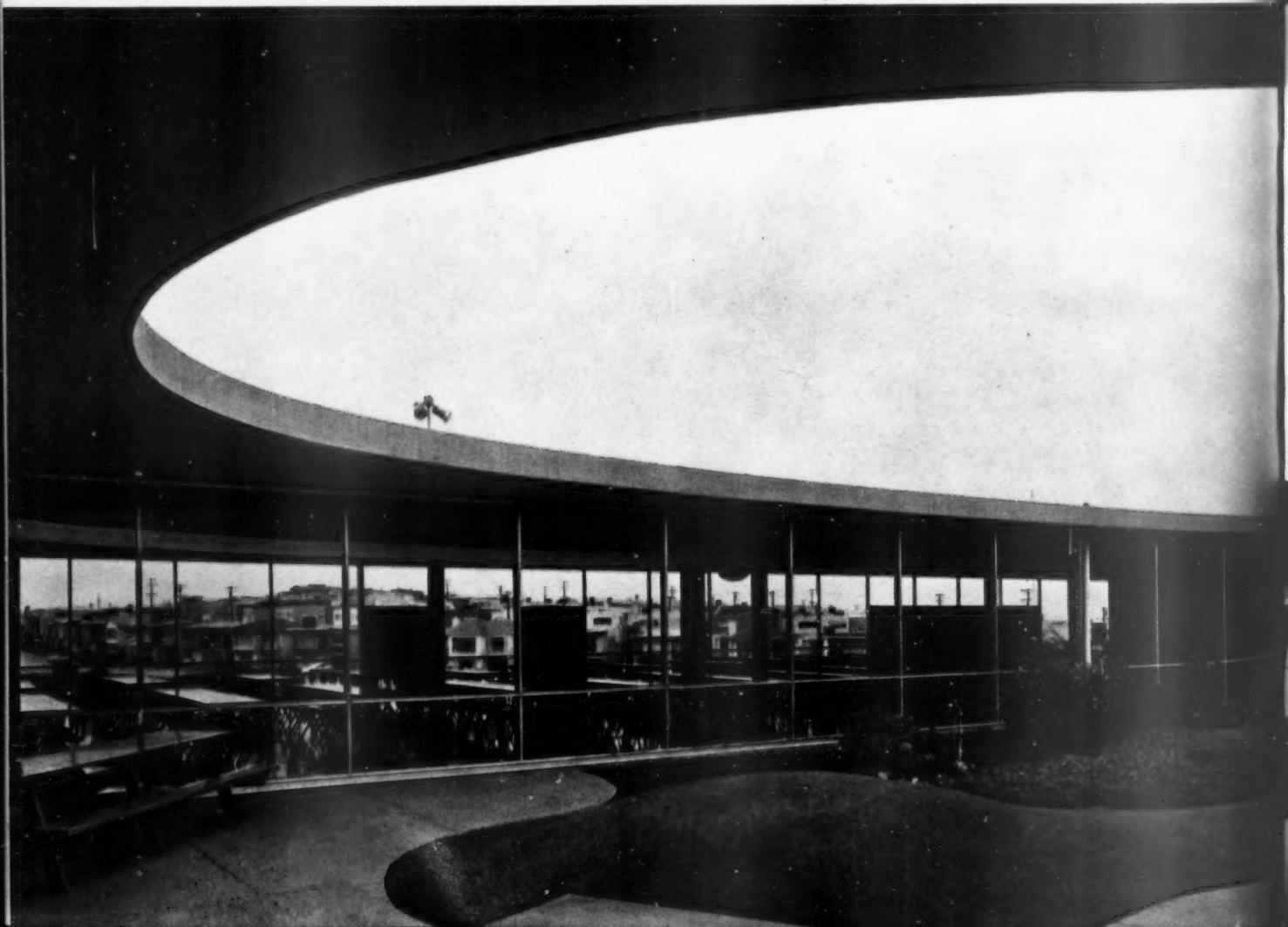
Architects have come from as far away as Austria and Japan to study and admire this school. Mr. Ciampi told us why:

"Westmoor is visual evidence that our original design philosophy was correct. It is a large school, designed to accommodate 1,500 students, yet the building never dominates. The proportions—human figures to structure—are pleasing. And the community paid no more for this unusual design concept.

"Westmoor costs are comparable to secondary school cost standards for this area—and I mean austere standards. The California State Aid School Program is a stringent law which requires school buildings to be built at very minimum of cost.

"This same design economy applies to the second increment, now in its early stages—consisting of additional classrooms, science labs and shops. These additions will be constructed within the State Aid Program."

Cafeteria (viewed here from an inner court) has window walls of L·O·F Heat Absorbing Plate Glass for reduction of sun heat and glare.



al
s"
al
er
a

eir
d-

nd
ld

gn
to
ni-
re
al

ost
ds.
ent
ry

n-
al
ill

re.



The library also opens onto an inner court. Notice the freedom from distortion in the objects seen through the plate glass walls.

EDWARD D. MORGAN
Superintendent
Jefferson Union
High School District



The huge window walls in the gymnasium are *Tuf-flex*® tempered plate glass. They flood the big gym with daylight. This glass is tempered for greater safety and lower maintenance.



We wanted Superintendent Morgan's opinion. He told us:

"I definitely feel that Westmoor is a school which in practice is every bit up to its plan. In spite of its exposed hilltop position, it is a most welcome place. The kids love it.

"The community was slow to accept this design, citing the extensive use of glass as impractical for a school located on the San Andreas fault. Then came the big earthquake of March 1957. Not a pane was broken. That allayed their fears."

Principal South also had some interesting comments:

"The central grouping, as well as the many other design factors, serves a dual purpose: it creates a refreshing atmosphere for the student, while protecting the school and its activities from the extreme weather conditions prevalent in the area.

"There's a noticeable change in student attitude. Just as a family receives a mental lift by moving from an old home to a new one, Westmoor students have experienced a similar lift in spirits."

GLEN SOUTH
Principal
Westmoor High School

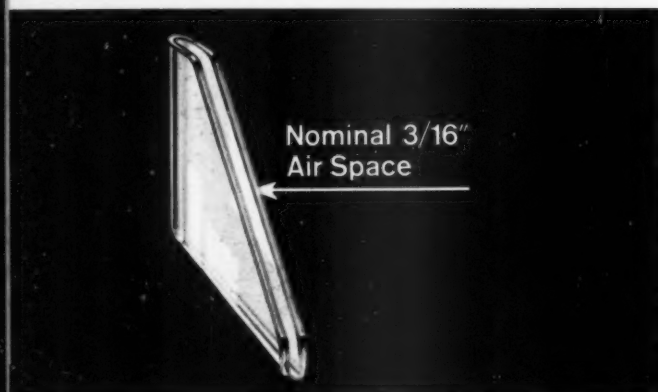
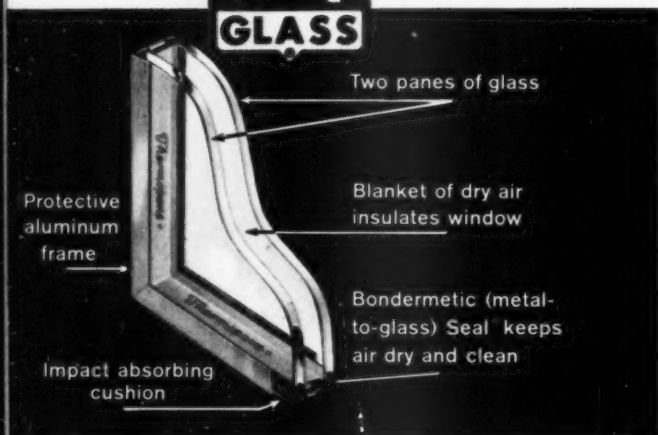


L O F
GLASS

a Great Name in

Glass

LIBBEY·OWENS·FORD GLASS CO.



For complete information on any of these L·O·F products, call your L·O·F Distributor or Dealer (listed under "Glass" in the Yellow Pages). Or write to Libbey·Owens·Ford Glass Company, 608 Madison Avenue, Toledo 3, Ohio.

THERMOPANE®

Thermopane insulating glass puts two panes of glass and a sealed-in blanket of dry, clean air between the children and the outdoors. Drafts are reduced so rooms are more comfortable, especially for children sitting close to windows. *Thermopane* deadens outside noises. Compared to single panes, 1" *Thermopane* cuts heat loss almost in half. Recommended for all windows where its insulating properties would result in substantial savings in winter.

Thermopane is now available in two new, improved types: New Super *Thermopane* (left, above) with the famous *Bondermetic* (metal-to-glass) *Seal*® now has its edges protected with an aluminum frame. *GlasSeal*® *Thermopane* (left) sets new quality standards for all-glass insulating units. Made of DSA sheet glass, its uniformly rounded, smooth edges make glazing easier and faster. Ideal for both wood and metal sash.

TUF-FLEX®

Tuf-flex tempered plate glass is 3 to 5 times stronger than regular plate glass of the same thickness. Yet it's as clear as any fine plate glass. If maximum resistance is reached, *Tuf-flex* disintegrates into relatively harmless, rock-salt-size particles. Recommended for gymnasiums, entrance doors and side lights, areas facing playgrounds . . . any area where youngsters and missiles are in rapid motion.

VITROLUX®

Used instead of masonry as an exterior facing material, also for interior partitions. Rich color, fused to the back of this clear, heat-strengthened plate glass, adds youthful beauty and cheerful character to your school. Natural resistance to weathering, crazing and checking. Standard maximum size of *Vitrolux* panels is 48" x 84". Special orders up to 60" x 84". Thickness: 1/4" plus 1/64" minus 1/32". Sixteen standard colors plus black and white. Also in nonstandard colors subject to manufacturing limitations.

LIBBEY·OWENS·FORD

608 Madison Avenue
TOLEDO 3, OHIO



A digest of current happenings in public education

School teams block tangent, square root

Students of 21 New Jersey high schools will be in the stands this year rooting for their heroes to square that root, block the tangent and plot a curve in a new "athletic contest" designed to encourage student interest in academic subjects.

Interscholastic mathematics contests, staged by five schools in the area last spring, were so successful that 16 more institutions have asked to join the competition this year.

The competitions are staged much in the manner of athletic events. Five problems are prepared for each meet by teachers not affiliated with the participating schools. The questions are delivered in sealed envelopes and read to a team member from each school simultaneously.

The students work against time and each other. They have between three and eight minutes for a single problem and score points for each correct answer.

A proposal to form a regular mathematics league among the 21 schools is under consideration but seems unlikely to win general approval. The schools involved fear that competition would become too formal and that teachers of losing teams would be subjected to pressures similar to those which afflict football coaches.

On the other hand, it would be interesting to see a "coach" beating the bushes for a fast multiplier, along with a fleet halfback.

Ohio court ruling closes Cleveland libraries

Libraries at Cleveland's public schools were temporarily closed early this term because of a state supreme court ruling in another county.

The court ruled, in a case brought in Ross County, that a library board cannot pay the bulk of school library costs unless the school board can not afford to pay its own way.

In Cleveland, the library system, which is technically a part of the school system, pays most of the costs for school libraries. The Cleveland Library Board, fearing a taxpayer's

suit, declined to continue that system this year unless the school board agreed to reimburse it if the arrangement was later declared illegal.

The situation has been referred to legal authorities to thrash out. Meanwhile the libraries have reopened under an agreement to continue the old system with the stipulation that if changes become necessary they will be retroactive to July 1, when the last agreement expired.

Regulations prevent teacher from teaching

A few months ago *Time* magazine featured Geneticist George Beadle on its cover. In one of the many interviews that resulted from this publicity, the California Institute of Technology professor, one of the leading men in his field, credited a high school teacher,

Bess McDonald, with having inspired him to go to college and follow a career in science. "If it weren't for her," he said, "I probably would be farming right now. She was my best teacher."

Bess McDonald, who inspired one great scientist, and many lesser ones during her career, taught altogether for almost 15 years. Then, during the depression, she left her occupation to make room for needy family men.

Bess McDonald, now Mrs. J. C. Higgins, is still interested in teaching. A year ago she applied for a job in Jackson, Neb., where she lives. This year she sought a job in a rural school two miles from her home. Each time she was turned down.

What was working against her? Neither age nor health was a factor, for at 65 she is a robust, healthy woman.

Her trouble, apparently is a lack of proper college credits. Although she holds a "lifetime" teaching certificate in Nebraska, she would have to return to college in order to take 12 hours

Too good to miss . . .

College material . . . A citizens' committee in Manhasset, N. Y. is surveying colleges throughout the nation this year to find out how well prepared Manhasset students were for college. The survey is designed to discover how students are doing and what the schools can do to improve their preparation.

In driver's seat . . . Students in one seventh grade class in Mount Sterling, Ky., never go off their bus during the first week of school. The regular building was filled and an annex still under construction so students remained in the bus and the teachers taught from the driver's seat.

Academic varsity . . . Denison, Tex., is awarding varsity letters and sweaters to students excelling in academic work this year. If colleges started doing this, you wouldn't be able to tell a student from an athlete without a scorecard.

A lot of hoop-la . . . Two grade-school principals in Huntington, W. Va., started a trend early this fall when they were the first to ban hula hoops from school grounds. The principals said the hoops took up too much playground space and were a safety hazard on stairs.

On the move . . . School board members in Levittown, N. Y. will really be jumping this year. Their meetings will move from school to school so that residents in all parts of the district can watch the board in action. Previously meetings had been held in the district's administration building.

of graduate work in education before the state will allow her to teach again. Nebraska has a reported teacher shortage.

Court rules board may not ban wed students

Circuit Judge Timothy C. Quinn of Michigan, has ruled that the Caro, Mich., school board had no legal right to ban two married seniors from high school. The two students involved were married in the middle of their

junior year with parental consent.

When the pair sought to register for school this fall, the board passed a resolution not to permit married students in school. The case was brought before Judge Quinn who was asked to rule on the legality of the board action.

In instructing the board to admit the two students to school, the judge said "The regulation [of the board] does not set up standards of conduct tending to improve moral and social behavior for the violation of which a student may be expelled.

"It merely says 'For an act in the

past, you cannot enroll.' And what is the act? Marriage, the sanctity of which has ever been the concern of the law."

This apparently was the first time since 1929 that a judge had been asked to rule on a question of this nature.

SF city attorney stymies school study

Efforts of five California school boards (SM, Sept. '58) to find new sources of income have been stymied by a ruling of the San Francisco city attorney.

Mrs. Georgiana Hardy, president of the Los Angeles board and chairman of the five-board committee, told SCHOOL MANAGEMENT that four of the co-operating boards had already submitted their checks.

In San Francisco, however, the city attorney has ruled that the board does not have the right to spend public school money for such a project.

Says Mrs. Hardy: "I am inclined to think it is news . . . when the city attorney can control the actions of a board of education."

Physical fitness group draws up program

A program to prevent softening by "automobility" and "spectatoritis" has been drawn up by President Eisenhower's Council on Youth Fitness, under the leadership of Shane McCarthy.

The seven-point plan has been submitted to the President for his approval. Essentially it calls for Federal, state and community action to help develop physical and character fitness in back yards and playgrounds. Schools will be asked to cooperate in the drive.

Before drawing up the program the council heard that 91% of the elementary schools in this country have no gymnasiums and more than 90% of school-age youths take no part in organized athletics. The council was also told of a sample fitness test given to European and American children. While 57.8% of the Europeans passed it, 92% of the Americans failed.

State ruling stops driver training class

Driver training classes in Columbus, Ohio, have been halted pending

PROVED IN USE

For High School Libraries

Accurate book charging is guaranteed — date due and student's number printed on book card.



The Gaylord Automatic Book Charging Machine is small and compact. Takes little desk space. Available in AC or DC.

Write for descriptive brochure — plan now for the future!

635.9
7853
Free

All about house plants

FEB 18	5659
MAR 26	7001
APR 23	4533

Proof of the charge is printed on the card. Borrowers appreciate accurate record.

GAYLORD

Automatic

Book Charging Machine

Large enrollments mean busy days in High School Libraries. Simplify book circulation control with a Gaylord Book Charging Machine. Large High School Libraries across the nation have been enjoying the conveniences and advantages of this charging machine for many years — some since 1940. Rental cost is only \$50.00 per year.



library supplies

Gaylord Bros., Inc.

SYRACUSE, N.Y. STOCKTON, CALIF.

"the house of prompt, friendly, personal service"

(Circle number 705 for more information)

study of a ruling by Ohio Attorney General William Saxbe. Saxbe ruled that the board of education cannot collect driver training fees from students because this is opposed to guarantees of free education.

At the same time State Auditor James A. Rhodes warned the schools that they may not buy liability insurance on the training cars because the board does not own them.

Columbus has been renting eight driver-training cars and charging students taking the course a \$3 fee. The money was used to buy liability insurance and to finance other aspects of the program which School Superintendent Harold Eibling has called "one of the most costly school programs."

The board has referred the matter to City Attorney Russell Leach, hoping that he will rule contrary to Saxbe. In that case it could continue the program pending court tests, since the city attorney is the board's legal adviser.

Russian language study meets certification-curtain

Bohdan Czopyk, a Polish-born linguist who speaks five languages fluently and holds several European college degrees, is a specialist in Russian.

As such he was hired by the Jefferson County, Colo., schools to teach a class in Russian to the district's high school students. Better than 200 had expressed an interest in such a class and somewhere between 100 and 125 were expected to actually register.

However, the whole Jefferson County program has been put in jeopardy by a state education department ruling that Czopyk lacks the courses in education necessary to obtain a teaching certificate. Although he pierced the iron-curtain to learn Russian, he had not been able to get through the certification-curtain to teach it. He must take 20 semester hours of courses in order to become a regular teacher.

Colorado state officials have indicated a willingness to allow Czopyk to teach with a temporary letter of authorization this year only, while he takes courses in education at Denver University. In order to keep teaching next year, Czopyk will have to spend the summer practice teaching.

New Jersey school tries industrial TV

The use of industrial television as an educational tool, in contrast to the

master teacher technique of studio-type closed-circuit TV, was demonstrated in an experiment at the Bergenfield, N. J., high school.

On the spot illustration of a geometry problem which involved indirect measurement of the school building was beamed from the courtyard to students in a second floor classroom.

It was pointed out that industrial TV is used as an educational supplement to teaching rather than as a substitute for the teacher. The students could interrupt the program at any time to ask questions via a two-way

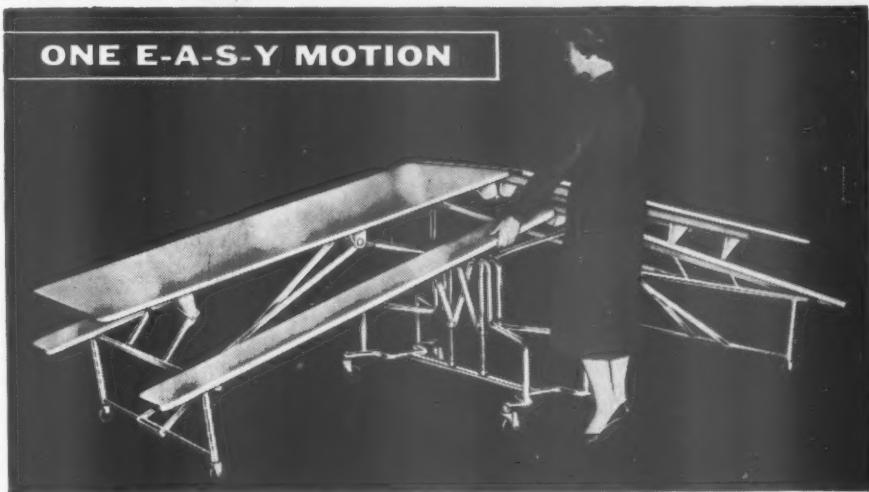
communication system. And, frequently, the camera action was stopped to allow for extended discussions of specific points which interested the students.

This TV system, manufactured by the Philco Corp., can become a searching "eye" through which the teacher and the students can explore the world around them without leaving the classroom, Bergenfield educators feel.

An added asset—no bulky studio equipment is necessary for this valuable teaching supplement.

NEW HOWMATIC "12" BENCH AND TABLE

ONE E-A-S-Y MOTION



OPENS IN 3 SECONDS! FOLDS IN 3 SECONDS!

The new HOWMATIC "12" bench and table opens or folds in one, easy, automatic action! Opened, a foolproof safety lock grips this 12 foot unit automatically. Folded, it remains securely locked, the release bar at adult height.

Even in close quarters, the HOWMATIC is compact and maneuverable: Folded, the HOWMATIC's four, large swivel casters make the unit easy to move in all directions. Opened, four fixed casters on bench legs secure the unit firmly.

All HOWMATIC surfaces are always exposed for easy cleaning, even when the unit is folded. This feature—exclusive with the HOWMATIC "12"—cuts cleaning time up to 50%!

The new, 12 ft., benchless HOWMATIC "T". Unique Floating Action makes opening or closing this unit almost effortless. . . . The center, castored legs touch the floor at all times; the four corner legs touch the ground only when the unit is fully opened. . . . They anchor the HOWMATIC in place. This eliminates opening and closing drag, makes the HOWMATIC "T" almost effortless to operate.



FREE! Get complete information on the BIG 3 in school mobile units: (1) the new HOWMATIC "12" Bench and Table, (2) the new benchless HOWMATIC "T" (3) the 6 ft. HOWE Bench and Table (not illustrated). For free, illustrated folder, use the handy coupon today!



HOWE FOLDING FURNITURE, INC. SM-118
1 Park Avenue, New York 16, N. Y.

GENTLEMEN: Please send me your free, illustrated folder containing complete data on the new HOWMATIC "12", the new, 12 ft. HOWMATIC "T" and the 6 ft. HOWE Bench and Table.

My name _____
Title _____
School _____
Address _____
City _____
Zone _____ State _____

HOWE FOLDING FURNITURE, INC.

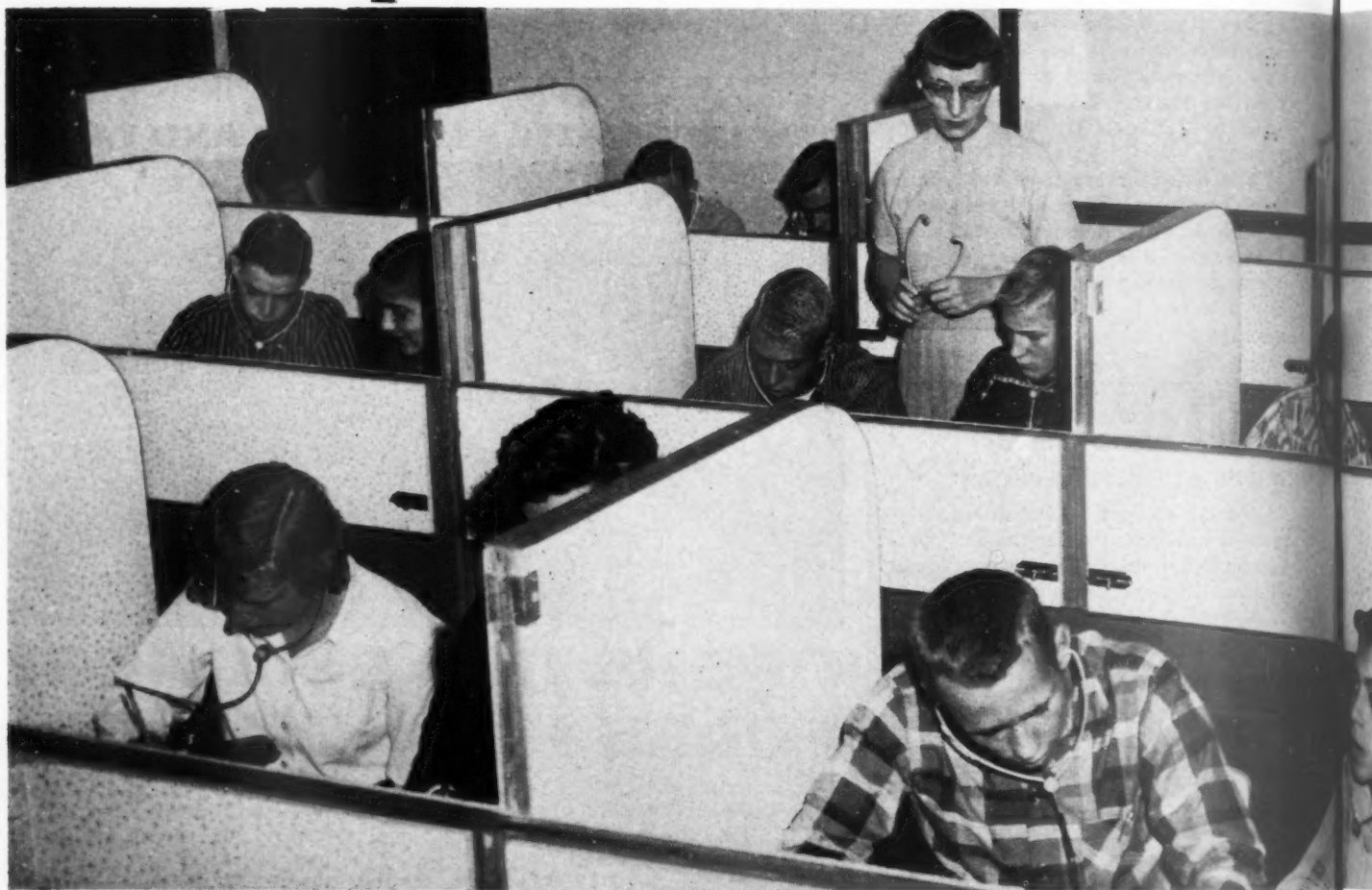
1 PARK AVENUE, NEW YORK 16, N. Y.

If it folds—ask HOWE!

(Circle number 706 for more information)



The new way to teach



■ ■ ■ It's time for plain talk on this matter of teaching foreign languages.

If you ever studied French, you can probably recall (with pain) the long years you spent memorizing lists of words and rules of grammar. Then—if you finally came face to face with a Frenchman—you probably found the labor had been absolutely worthless. Things haven't changed. Except for the rare pupil who will need a *reading* knowledge of a foreign language in his future work or further studies, today's student never gets a fair return for the time he invests.

Does this mean we should drop

the study of languages from our already overcrowded curriculum? Obviously, we can't afford to do that. Consider these facts:

Item: In August, 1957, the Department of State issued a circular (No. 267) setting up the present policy on language competency for members of our foreign service. This directive was based on a vital need for our representatives to be able to talk with people throughout the world. It requires that each officer must, within five years, acquire a *useful* knowledge of at least two foreign languages—and "useful" is defined as enough knowledge of the structure of the language and its

vocabulary to take care of routine matters in representing our country. French, German or Spanish are suggested as one of the two languages and Italian, Portuguese or the language of a special area as the other. Some of these "special area" languages are Arabic, Burmese, Chinese, Finnish, Hebrew, Russian, Thai, and Turkish.

Item: Outside of the foreign service, many of our people who have taken graduate study in agriculture, engineering, or education, are now being asked to accept overseas assignments. We cannot expect the people on whom we are lavishing our aid to speak our language. We aren't philanthro-

foreign languages



Forget the way you learned French, Spanish or German. Something new has happened that promises faster teaching, at lower cost with fewer trained teachers. Your district should be investigating it now.

By MRS. RICHARD BARROWS,
Westport, Conn., Public Schools

pists in this effort—we're propagandists. Russia recognizes this: of all 10-year-old pupils, 46% are studying English, 35% German, 24% French. Thousands are learning esoteric languages and dialects. Contrast this with the fact that of all our population, only some 8,000 are now studying Russian.

None of this is news to educators. Most would add the time-honored reasons for studying foreign languages to the urgent ones mentioned above. Yet, even superintendents and board members who heartily agree that languages must be taught, wonder how they can manage to introduce or ex-

pand any foreign language program in an already crowded curriculum. They are even more overwhelmed by the thought of finding enough adequate, let alone excellent, bi-lingual teachers. They just don't exist in sufficient numbers in the United States.

An answer is in sight

The picture is not totally grim. Our armed services, many colleges, and an increasing number of high schools, seem to have found a successful answer—a method that might be called the "two lane road to language study." One lane is a re-examination of what language is. The other is the

development and study of new and better ways to teach it. This boils down to *what* to teach, and *how* to teach it.

For several months, SCHOOL MANAGEMENT has been studying this new approach. On the following pages are the results of this research. To avoid the obvious pitfall of a layman's over-simplification, we arranged with an experienced public school language teacher to evaluate the material we had collected and write the following article. The author, Mrs. Richard Barrows, teaches French, Latin and English in the Westport, Conn. school system.

(please turn page)

SCHOLARS and educators have come to the conclusion that, whatever else a language may include, it is certainly firmly based on vocabulary and grammar. But, in looking closely at languages, they have found that a living language is not rigid and unchanging and it cannot be taught by a set of fixed rules. Rather, they have found that if rules are closely followed, the result is a stilted, unnatural "foreign" way of speaking.

The newer approach is through the study of the *patterns* that underlie the various types of sentences we use in conversation, considering each word in context, rather than isolated in a list.

So much for the approach to grammar. But there is more to a language than this, as many will agree who are able to read and write—but unable to speak or understand—a foreign language. There must be a *knowledge of the sounds* as well as an understanding of the written words. Since communication is basically an oral proposition, it is important that the student have the chance to hear native speakers, or people who talk like natives, and learn to speak with the same accent, intonation, and vocabulary.

The best way, of course, is to send our pupils to spend some years in the foreign country of their choice and let them speak only with natives. This isn't apt to happen tomorrow. Next best is to have an excellent teacher who "speaks the language like a native" and who has the patience to repeat and repeat, and repeat with endless patience. This is also beyond the reach of most of us.

But a new electronic answer has been found, one which has served with surprisingly good results—the language laboratory.

What is a language laboratory?

This is like asking, "what is a school?" for there are as many kinds of laboratories as there are schools. They have only one thing in common—recording and playback machines which can be used as a teaching aid.

This electronic system performs two critical functions:

1. It provides the student with a "voice" that speaks the language he is studying *as it should be spoken*.
2. It provides the teacher with a means for accomplishing the important repetitive functions in teaching language, with none of the time-consuming aspects.

These two critical possibilities can and have been used by teachers in dozens of different ways. Newer uses and methods are limited only by the ingenuity of the teacher and the budget of the school. Consider these possibilities:

- Recordings to be used by the students are made by the best teacher in the school (or by an outside expert) so that all pupils get a uniformly good aural experience.

- The potential for individual attention is improved—while 24 pupils listen, the 25th can be "taught" by the teacher.

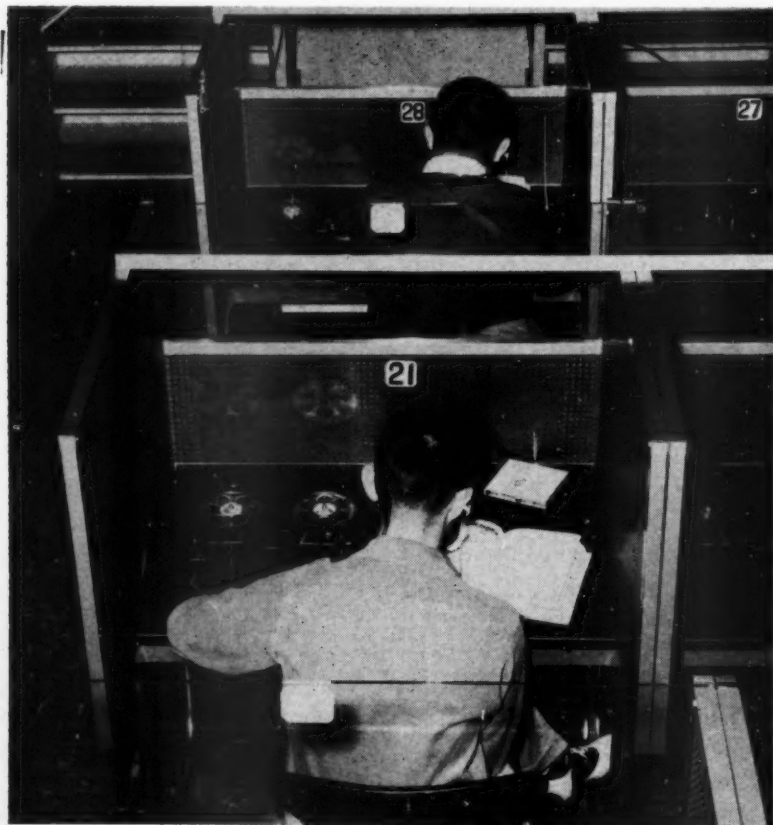
- It seems possible that one teacher can handle more students successfully—or that a master teacher with an assistant can cover the same number of pupils as two experienced instructors. This re-arrangement of staff and time may be one of the most important aspects of the language laboratory until our supply of teachers closes the gap with demand.

Wide range available

To sum up, the language laboratory is nothing more than a place where a teacher and pupils get together, with a mechanical aid, to study a foreign tongue. After this basic definition, however, it is impossible to generalize. The types of language laboratories cover a range starting with no investment (assuming your school had a single tape recorder which would be available to the language department) to multi-thousand dollar installations. For that reason, in the following description we have grouped these laboratories together loosely according to the type of equipment they contain, and the kind of aid they can give the pupils and the teacher.

Most schools have at least one tape recorder, or a magnetic disc recorder and a record player. That's the minimum equipment needed to get started. In this situation, the teacher has more than one voice. The pupil can hear his teacher's "live" voice explaining the lesson, answering his questions, and encouraging him, correcting him. But more, in this situation he can hear his teacher's *recorded* voice tirelessly repeating the phrases he needs to learn. After listening a while, each

continued on page 64



Remodelling an

OLDER BUILDINGS

There's more to an older building than its age. In this article an experienced schoolhouse architect provides four case histories of conversions and additions that have been handled successfully and economically.

There are two kinds of "older buildings." One—the antique structure of World War I vintage—is seldom worth the cost of modernization. At best, it can be repainted and re-lighted to provide minimal space until modern quarters can be afforded.

The second type of older structure is quite a different problem. These are serviceable buildings built before World War II, but now "dated" in terms of modern educational practice. These are the buildings that come under close scrutiny whenever a school district contemplates a new schoolhouse. Here are a few of the questions that schoolmen ask themselves:

1. Shall we add to the old structure at all, or would a new school in a new location be the best solution?
2. Must the old building be used for the same grade levels as before, or can it be converted "up or down"? (see *SM*, March, '58).
3. Will existing central facilities (cafeteria, gymnasium, etc.) be adequate if we put an addition on the older structure?
4. Should we spend money on modernizing the older plant when we make an addition?

SM asks an expert

In an effort to find out if there were any basic axioms that could be applied to the problems of converting or adding to older structures, SCHOOL MANAGEMENT editors presented the above questions to Stanley Sharp, partner-in-charge of educational projects for Ketchum and Sharp, Architects. The case histories on the following pages are drawn from this firm's work. None of the big questions are answered categorically—nor can they be. But these examples should serve as "thought starters" for the harrassed schoolman in search of a solution.



Converting a high school to elementary use.

IN 1953, several school districts in Westchester County, N. Y., centralized. As part of their plant expansion program, the board of education of the unified district planned to convert an existing 14-year-old K-12 school into a six-year junior-senior high school, and build a new elementary school. At this point the architects were brought into the picture.

Said Architect Sharp, "Naturally, it costs less to build an elementary

school than a high school. By the same token, it costs far more to convert elementary space to secondary use than it does to convert downward. In this case, conversion of a K-12 school would, at best, have produced a makeshift and expensive high school. The school was on a hillside site and room for expansion was limited. Moreover, it was in a non-central location that would have required excessive bus transportation expenses. The board

recognized these limitations once they had been pointed out. Instead of converting to a high school, the process was reversed."

In converting the old K-12 school to elementary use it was necessary to produce eight additional elementary classrooms in space previously used by high school students. Because of the high cost of the new high school to be built, a budget of only \$25,000 was allowed for this conversion. Here's how eight classrooms were "found" without major structural changes:

1. A former music room and adjacent store room on the ground floor were merged and converted into a new classroom.

2. Two small high school rooms used for specialized classes were combined into one elementary classroom on the first floor.

3. A similar transformation was carried out on the second floor by the simple removal of a wall.

4 and 5. A large shop on the second floor was converted into two new classrooms and a conference room where teachers could meet with each other, parents and students (see picture and diagram).

6 and 7. The former homemaking suite underwent surgery and produced two more classrooms.

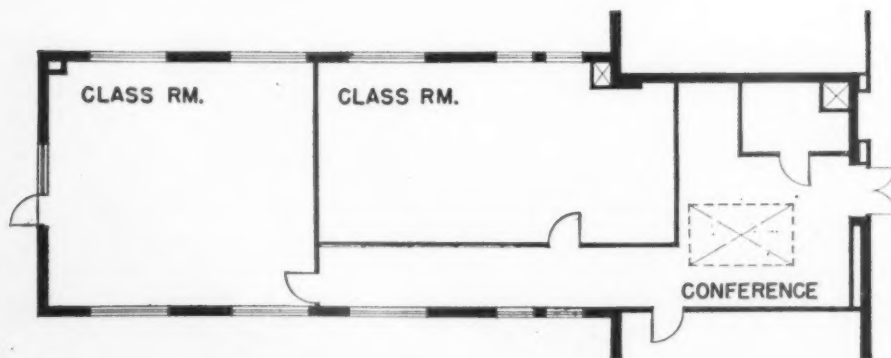
8. The eighth classroom was produced by removing laboratory equipment from the former science room.

OBSERVATION

Elementary classrooms should be bright, cheerful, and non-institutional in feeling. But they seldom require the specialized equipment or planning demanded by a modern secondary plant. In this case, a program of relighting and repainting produced a good elementary educational environment at low conversion cost.



Large shop used by high schoolers (shown above) was converted into two classrooms for younger students and a large conference area where teachers could meet with parents, students or each other (see diagram).



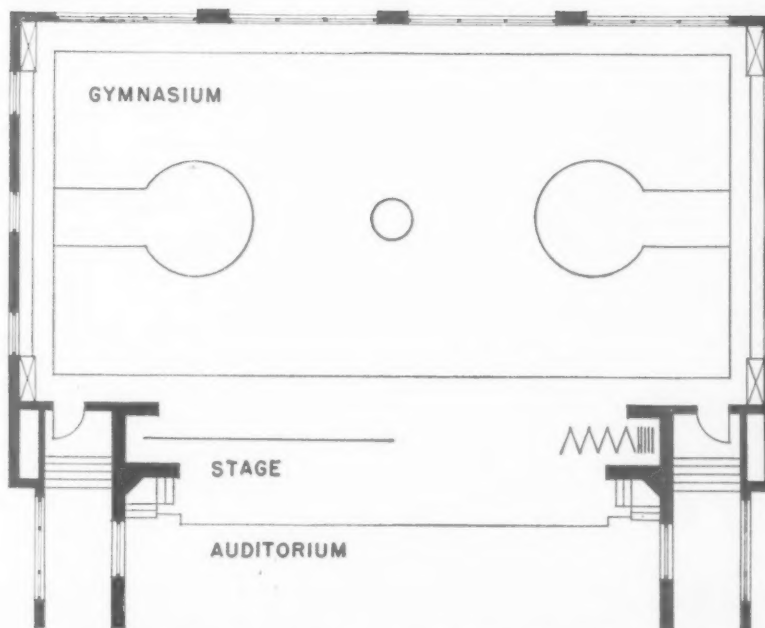
Build a new Jr. high school— or add to the old?

A CLASSIC example of the problem, "Should we expand our present school or build a new one elsewhere?" can be found in the junior high situation in Darien, Conn., about six years ago. They had an older junior high school building capable of holding about 350 pupils. Population growth indicated that facilities for at least 400 more were needed almost immediately. Before the architects came on the scene, the school board had made a preliminary survey which pointed out the desirability of the school's present central location but which also emphasized the need to bring the existing facilities up to date. Thus, the problem for the architects boiled down to this: whether to build a new junior high school in another location and modernize the existing building, or modernize the original building and add new spaces directly to it. According to Sharp, several factors pointed to "addition" as the logical solution:

- A junior high school of 750 pupils was consistent with good educational practice.
- The site of the existing building was centrally located, so transportation costs would not be a factor.
- A junior high school requires certain basic and costly facilities which can support a large student population without overcrowding (gymnasium, library, homemaking laboratory, shops and cafeteria).
- Additional land was available to permit the physical expansion that would be required.

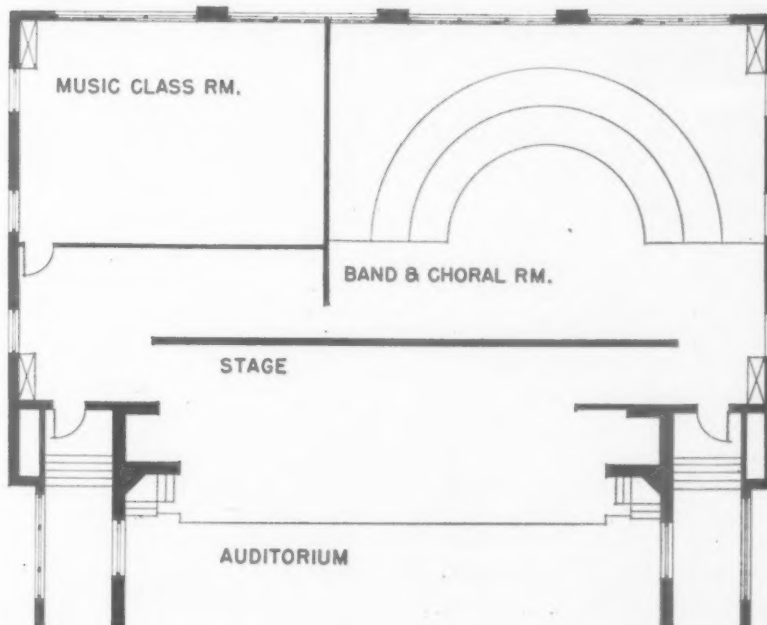
While the duplication of facilities factor was a principle consideration in determining to add to the existing building, this did not mean that certain facilities could be left "as is." The cafeteria, for example, was poorly located and totally inadequate.

BEFORE

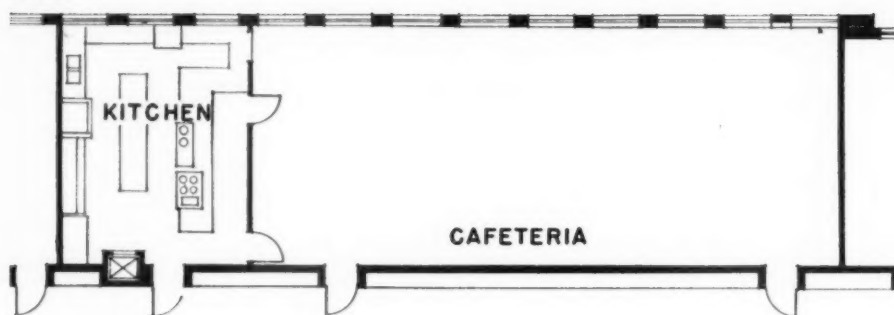


The old stage-gymnasium unit (above) was inadequate. Part of the gym area had to be used for staging large productions. In addition, music space was needed in the new program. A new gym was built close to the playing fields and all physical education facilities, including showers and lockers, were centralized. The former gym area was utilized (below) for an expanded stage and two music areas. Only construction required was a fixed sound-proof "lock" between the auditorium and music areas.

AFTER

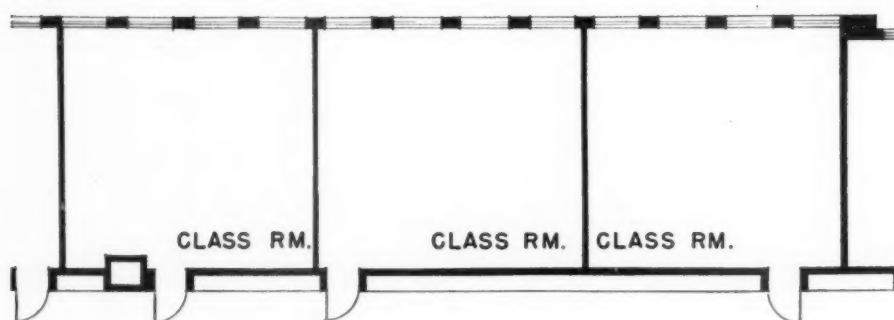


BEFORE



The existing cafeteria (above), located on the second floor, was converted into three modern classrooms (below). The cafeteria had not only been a potential hazard—a crowd of people above the ground floor is always dangerous—but was too small, inefficiently equipped and had bad service access. The new cafeteria is close to the service driveway and is laid out to feed large numbers in a relatively short time.

AFTER



quate for the new enrollment—though it did not need to be twice as large to handle double the student load. It was converted, with a kitchen, into three classrooms (see diagrams), and a new kitchen and cafeteria were provided in the new structure that was added. The old gymnasium, which was inadequate for the original plant and located in an area which disturbed other activities, was converted to provide music and stage facilities (see diagrams page 29), and a new gym was built. The old library, which was too small for present-day library demands, was moved to the new wing and the former space—larger than the usual classroom—was converted into an English laboratory.

OBSERVATION

When adding to an older structure, a school district has a priceless opportunity to correct inadequacies in the existing plant. If major structural changes would be necessary to accomplish this, consider building a wholly new facility and converting the old one to different use. Generally it permits the construction of costly special-purpose areas at "bargain rates" since the extra cost to the district is only the difference between the cost of the new facility and the value of the converted space.

OLDER BUILDINGS

3

Reclaim inefficient space when you add

THE DARIEN junior high school problem described above had a parallel situation at the elementary level. As a part of an over-all program to upgrade the education program and provide sufficient space for students already overloading existing facilities, it was found necessary to double the capacity of the Holmes Elementary School. Built in 1935, this school was a sturdy, conventional two-story building with a partial

basement that housed a boiler room. It contained 11 classrooms, and a combination gym-auditorium, locker rooms, offices and a library. It had been very well maintained and the board wondered whether there should be any changes at all in this structure except for the addition of a new classroom wing.

Says Sharp: "We learned a long time ago that frequently a very simple conversion can improve tre-

mendously the functional efficiency of a building, even though it may already be performing satisfactorily. Together with the school officials we analyzed Holmes very carefully with this in mind."

One of the first surprises was the old locker room set-up. The locker rooms were not being used by elementary students, nor did they need them. In fact, there were no lockers at all and the space was filled with

desks and chairs in order to provide a makeshift classroom. Naturally, the shower rooms were functionless.

Step one in the renovation plan was to knock down the walls separating the showers (see diagrams) from the locker rooms and to convert the enlarged area into a bright, cheerful, modern kindergarten, close to the existing kindergarten. Thus, a badly-functioning space was converted into a highly productive room, doubling kindergarten capacity.

The existing library was totally inadequate for the projected library program but was very inexpensively converted into an excellent classroom.

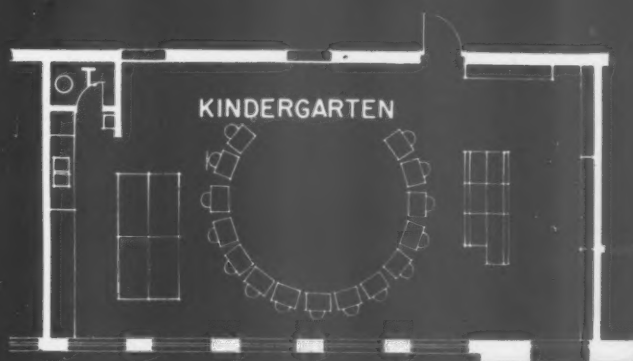
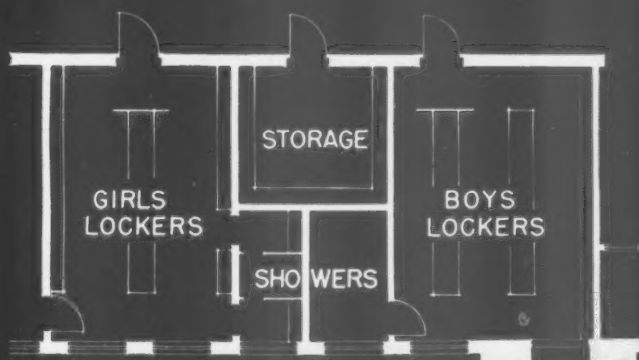
No provision had ever been made for a hot lunch program in the school. The architects designed a multi-purpose room suitable for use as a library and cafeteria.

Results: The new wing contained only four classrooms and the multi-purpose room. Yet, the school had six additional classrooms at its disposal, plus an improved library and feeding program!

OBSERVATION

This is a typical example of how an existing structure can be scrutinized on the premise that a very simple conversion may substantially up-date it. Conversion costs were very modest. It is interesting to note that in this school it was possible to add a new boiler in the existing structure simply by rearranging the piping in the limited area where the present boiler was placed. The sum thus saved was far in excess of the total cost of modernizing the original building.

continued on next page



OLDER BUILDINGS

4

Upgrade out-dated space while adding



IN STARTING any combination involving conversion and new construction, it is important not to compromise too soon. Ideally, the school board and the architect approach their problems much as they might if they were building a brand new school. Their joint objective should be to eliminate the old-fashioned characteristics of the old structure and bring them up to the standard of the new.

The expansion of the Hyde Park, N. Y., elementary school is a good example of this philosophy in action. The town had a pleasant one-

story colonial-type structure, well-maintained and in excellent physical condition. But the school had been built in days of lower enrollments, so some of the basic facilities were grossly inadequate.

Major handicaps, according to Mr. Sharp, included a cafeteria that was too small for the present enrollment and a tiny "home size" kitchen that was inadequate for a hot lunch program. The combination auditorium-playroom was in constant scheduling conflicts. The teacher's lounge was in sorry condition and undersized. There was no health

suite—it had been changed some years back into a classroom. In addition, space was so tight that the principal was without a private office.

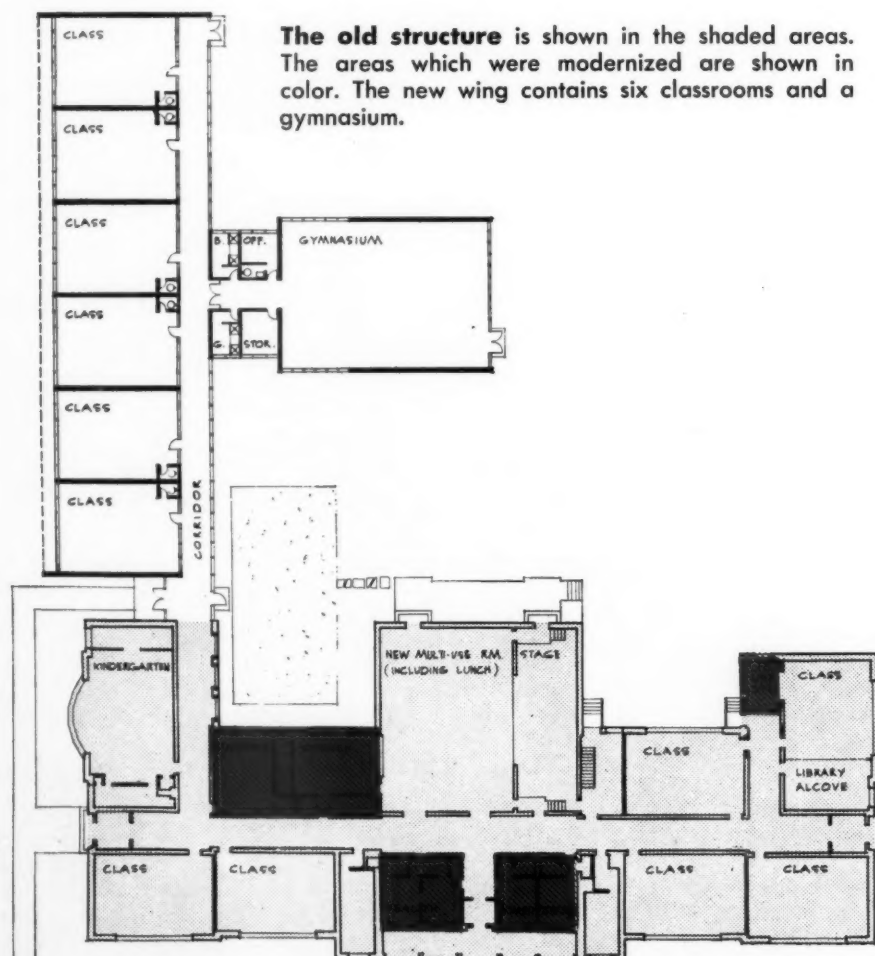
With a budget of only \$8,000, including a major expense for plumbing and equipment for a new kitchen, as well as the cost of converting the existing heating plant from coal to oil so that it could service both the old and the new wings, the architects were able to create a "modern" school (see diagram).

The original health suite was restored and the dingy teachers' room was converted into an office for the principal. The old cafeteria space was converted into a badly needed library and the ex-kitchen was found to be the perfect size for an adjacent librarian's workroom. At the same time, the old auditorium-playroom was transformed into a multi-purpose room that could serve effectively as a cafeteria and as an auditorium. In this conversion, ample space was reserved for a new teachers' lounge suitable for the enlarged school faculty.

It is interesting to note that the new wing was designed to *harmonize* with the existing structure in color and scale rather than to *duplicate* (see picture). Connection to the old structure is by means of an enclosed corridor. Says Sharp: "An important aspect of the design is that this expansion was planned at minimum cost and with minimum disruption."

OBSERVATION

It doesn't make sense to add expensive new classrooms without upgrading and integrating the whole plant. The total process need not be costly. It does require clearly-defined objectives on the part of the school board and administration—and some imagination. **End**



Guaranteed

A LIBERAL EDUCATION FOR ALL STUDENTS

No high school student in Raleigh, N. C. can get away with four years of "putting in time." All get the fundamentals first — take "fringe" courses later. Result: a phenomenal record of achievement for both fast and slow students.

By DR. NEILL A. ROSSER

Director of Instruction, Raleigh, N. C., Public Schools

■ ■ ■ Our core-interest program is based on the belief that secondary schools have a two-fold responsibility: to impart to *all* students a common body of basic knowledge and, in addition, to offer a variety of educational opportunities at differing intellectual levels.

In 1948, Raleigh's secondary schools were functioning in the traditional manner. Most students took four basic subjects, most of them had a study period each day, and

all participated in a period devoted to "activities." There were obvious weaknesses in this organizational pattern. Neither fundamentals nor special interests were sufficiently recognized. Equal time and equal credit allotted to each course tended to place an unwarranted equal value on each. Study periods occupied one-sixth of the school day, wasted a great deal of time and both student and teacher talent. In addition, the system reduced the choices

open to the individual students. If, for example, 50 students wanted to take journalism, and only one class was scheduled, half of these students had to make another selection. About the only real advantage of the activities period was the fact that it made for easy scheduling.

In 1948, under the guidance of Superintendent Jesse O. Sanderson, the faculty of Needham B. Broughton High School began to explore the problem. One aim was, in effect, to "toughen up" the program, but not to eliminate all the courses which critics now decry. A second, and vitally important aim, was to make secondary education a broad and enriching experience for *all* students.

It is understandable that Johnny—who can't master physics, chemistry and advanced algebra—might be kept in school and made a more useful citizen through appealing to his interests and abilities in courses in which he can succeed. It is understandable, too, that Jim—who is definitely college material—might be interested in, and gain useful information from, such courses as driver training and homemaking for boys. But both these students must be expertly guided: Johnny must be given the fundamentals and then steered into courses not only to his liking but suited to his abilities as well. Jim, too, must be given the fundamentals, but he must be encouraged to enroll in other classes that will both stimulate and challenge his more agile mind.

To create a secondary school program that would offer these features took time. Changes were gradual. Raleigh was fortunate in having a nucleus of capable teachers who were enthusiastic about the plan and who, in turn, sold the program to new teachers coming into the system. This faculty enthusiasm sparked a new attitude in the student body so that while today they may rock and roll with the best of them, they also place a serious and high value on scholarship.

The core-interest program

Graduation from Broughton High School requires a full 16 units of credits, distributed as follows: four units of English, two of science, gen-

eral science and biology; two of social studies, one of which must be American history; two of mathematics, both of which must be either general mathematics or algebra; one unit of physical education, earned at the rate of one-quarter unit per year for four years; and, finally, five electives.

Because Raleigh is organized on the six-three-three plan, students receive one year of high school work in two junior high schools which feed into Broughton High School at the 10th year level. Therefore, the core-interest (C-I) program has been extended downward into the junior high schools. At the ninth grade level 10 academic, full-credit courses are offered. Broughton High, with 1,500 pupils, offers 57 such courses. They range from general mathematics to college level algebra; from general science, chemistry and physics to college level physiology and anatomy; from general shop to electronics. These courses, which meet for a minimum of five full 55-minute periods per week (seven periods in the case of laboratory sciences and world history), constitute the core part of the program. Note that all core courses carry a *full unit of credit for two semesters' work*.

Interest courses, on the other hand, are not designed for unit or credit purposes. However, to provide flexibility, the successful completion of *four interest courses counts as one-half of one elective unit* toward the 16 units necessary for graduation! It should be pointed out, however, that the student who needs this type of credit for graduation is not considered college material.

Students receive grades of A to F in the interest courses, as opposed to numerical grades in the core courses. Interest courses are considered equal to core courses for establishing honor rolls or membership in honor societies, but they are given only one-fourth the value of core courses in computing a student's academic rank in class.

Each student is required to carry a minimum—which is also the maximum for the lower two-thirds of the class—of four core subjects each semester. Students who rank in the upper third of the class are encour-

SUGGESTED COURSES

Listed below are four suggested programs which students may follow in working out their course of study. It should be pointed out that these are

Course

1. General

2. Academic

(General College
Preparatory)

3. Technical

(Scientific College
Preparatory)

Alternate

4. Commercial

*Courses required for graduation.

OF STUDY 1958-1959 RALEIGH HIGH SCHOOL

only suggested and do not have to be followed by every student. Most students will find that one of these programs will meet their needs. If a deviation

from one of these is taken, great care should be used to assure that all requirements for graduation have been met.

9th

10th

11th

12th

English 1-2*
Math 1-2* or Gen.
Math 1-2*
Natural Science
1-2
Social Studies 1-2
Phys. Ed.

English 3-4*
Natural Sci. 3-4*
Math 3-4* or Gen.
Math 3-4*
Soc. Studies 3-4 or
Soc. Stud. 11-12
Phys. Ed.

English 5-6*
Soc. Stud. 5-6*
Core Elective
Core Elective
2 Int. Courses
Phys. Ed.

English 7-8*
Core Elective
Core Elective
2 Int. Courses
Phys. Ed.

English 1-2*
Math 1-2*
Latin 1-2 or
Nat. Sci. 1-2
Soc. Stud. 1-2
Phys. Ed.

English 3-4*
Math 3-4*
Latin 3-4 or
Soc. Stud. 3-4
Nat. Sci. 3-4*
Phys. Ed.

English 5-6*
Math 5-6
For. Lang. 1-2
Soc. Stud. 5-6*
2 Int. Courses
Phys. Ed.

English 7-8*
For. Lang. 3-4
Nat. Science 5-6
Core Elective
2 Int. Courses
Phys. Ed.

English 1-2*
Math 1-2*
Nat. Sci. 1-2
Soc. Stud. 1-2
Phys. Ed.

English 3-4*
For. Lang. 1-2
Math 3-4*
Nat. Sci. 3-4*
2 Int. Courses
Phys. Ed.

English 5-6*
Math 5-6
Nat. Sci. 3-4*
For. Lang. 3-4
2 Int. Courses
Phys. Ed.

English 7-8*
Math 7-8
Nat. Science 7-8
Soc. Stud. 5-6*
2 Int. Courses
Phys. Ed.

English 1-2*
Math 1-2*
Nat. Sci. 1-2
Soc. Stud. 1-2
Phys. Ed.

English 3-4*
Math 3-4*
Nat. Sci. 3-4*
Soc. Stud. 3-4
Phys. Ed.
2 Int. Courses

English 5-6*
Math 5-6
Nat. Science 5-6
Soc. Stud. 5-6*
Phys. Ed.
2 Int. Courses

English 7-8*
Math 7-8
Nat. Sci. 7-8
Math. 9-10
Phys. Ed.
2 Int. Courses

English 1-2*
Math or Gen.
Math*
Nat. Sci. 1-2
Soc. Stud. 1-2
Phys. Ed.

English 3-4*
Nat. Sci. 3-4*
Math or Gen.
Math*
Typing 1-2
2 Int. Courses
Phys. Ed.

English 5-6*
Soc. Stud. 5-6*
Typing 3-4
Shorthand 1-2
2 Int. Courses
Phys. Ed.

English 7-8*
Shorthand 3-4
Bookkeeping
Secretarial Prac.
or Clerical Prac.
Core Elective
1 Int. Course
Phys. Ed.

aged to take five core courses. Students carrying four core courses take two interest courses, while those carrying five take one interest course. Every pupil is expected to take physical education for two periods each week throughout his four high school years.

Interest courses

Interest courses are organized to meet both the interests and needs of students over and above the regular academic graduation requirements, and they are designed to tie in with specific academic areas. For example, interest courses are offered under the English department in remedial reading, journalism, oral English and creative writing, among others.

Raleigh has resisted the temptation to add interest courses which do not, in a very definite way, complement and enrich a regular academic field. The sole exception is the course in driver training, which is required by the State of North Carolina, and which is offered exclusively during the summer session.

Interest courses, which meet three times a week, are not assigned to just any teacher. The fact that they are an integral part of the various academic departments and can be scheduled at any time during the day, permits the use of teachers who are specialists in a given area. Interest courses take the place, to some extent, of activities generally associated with clubs or after-school organizations, and in some cases, of classes usually considered "core." An example would be journalism, a subject which is handled in many different ways in different schools. In Raleigh it is considered an interest course.

No interest course is organized for less than 25 pupils, unless space and equipment are factors. Students are asked to indicate their first, second and third choices of interest courses. Most students get their first selection, although it is occasionally necessary, because of schedule conflicts, to register a student for his second or third choice. Where remedial or refresher courses are needed, the student is strongly encouraged to register for them.

However, no Broughton High

School graduate offers remedial or refresher courses—or, for that matter, courses in creative writing, public speaking or courtship and marriage—as his passport to college. Yet every student has had from four to eight such subjects during his four years of high school, each course carefully selected on the basis of what he likes and what he needs to strengthen his academic training.

Four curriculums offered

Four possible curriculums (see pages 34 and 35) are offered Broughton students in an effort to provide each with the training best suited to his capabilities and needs. These are:

1. The General Curriculum. This

program is designed specially* for those who are *not* planning to go to college—although the minimum requirements for graduation will enable a student to enter most North Carolina colleges. The emphasis is on both core and interest courses which will meet the student's *vocational* aims.

2. The Academic, or General College Preparatory, Curriculum.

This program is designed primarily for those students planning to enter liberal arts colleges. The emphasis is on fundamental subjects and foreign languages.

3. The Technical, or Scientific College Preparatory, Curriculum.

This program is designed for stu-

dents planning to enter college to major in mathematics, science, engineering, or related fields. The emphasis is on four years of mathematics and/or science.

4. The Commercial Curriculum.

This program is designed for those students expecting to enter the business world immediately upon high school graduation, or for those who expect to continue their education in business or vocational schools. The emphasis is on typing, shorthand, bookkeeping and similar subjects.

Ability grouping used

Selection of the basic curriculum is made during the latter part of the eighth grade by the student in consultation with guidance counselors, home room teachers and parents. Of course, provision is made for a change of curriculum should it become necessary or desirable. Guidance counselors review each student's record with him toward the close of every school year. If he has changed his mind regarding his vocational or college goals, or if he is finding a particular course of study too difficult or not challenging enough, he is at liberty to revise his program so long as the minimum requirements for graduation are met.

In addition to offering a choice of curriculum, Broughton further attempts to meet the needs of individual students in the core part of the C-I program through another organizational device: *ability-achievement grouping*. Students are grouped on the basis of intelligence and achievement tests, academic grades and teacher judgment. They are registered accordingly for classes in English, social studies and science. In mathematics, the lower third of the class must take two years of general mathematics. On the other hand, the upper two-thirds of the class is permitted to go directly into algebra at the ninth grade level. In most other courses it is not necessary to group students. Such courses as advanced algebra (college level) and physiology and anatomy are self-limiting in this respect. In others, such as general shop and homemaking, general intelligence is not a major factor. Students are not grouped in home room,

INTEREST COURSES

In Raleigh, interest courses range from refresher mathematics and remedial reading—which students who need them are “encouraged” to take—to creative writing and world literature, coveted courses open only to the most gifted seniors. Although the successful completion of four interest courses counts as one-half of one elective credit

toward the 16 units necessary for graduation, students who must use this type of credit for graduation are not considered of college caliber. Nevertheless, the wide variety of the interest courses offered permits every student on every intellectual level to broaden his high school experience along the lines that will benefit him most.

English: Remedial English, two years of remedial reading, two years of journalism, three years of dramatics, two years of literature, three years of public speaking, creative writing, world literature.

Mathematics: Refresher mathematics, fundamental mathematics.

Social Studies: Two years of current history, psychology.

Natural Sciences: Plant propagation, advanced biology, photography, biological science projects, physical science projects.

Foreign Languages: Two years of French conversation, two years of Spanish conversation.

Industrial Arts: Woods, metals, basic electricity, mechanical drawing.

Household Arts: Two years of sewing, foods, home planning and decoration, courtship and marriage, homemaking for boys.

Commerce: Personal typing.

Art: Two years of art.

Music: Variety band, harmony and theory, general music, mixed chorus, beginning boys' chorus, beginning girls' chorus.

In addition, a few selected students take as interest courses: office assistant, library assistant, audio-visual committee, band assistant, and physical education assistant.

extra-curricular activities, or in physical education classes.

Students in the accelerated, or advanced classes, do not move through high school any faster than other students. The aim is to offer to those students capable of it, a type of instruction that is broader and deeper than that provided in other classes in the same academic area.

Guidance is important

Obviously, students entering high school in Raleigh do not have a cut-and-dried schedule they must follow. Because they do have an area of choice it is vital that they—and their parents—understand what is available. For this reason Raleigh publishes a guidance booklet which is given to every student during the second semester of the eighth grade. The student is expected to take the booklet home, study it himself and discuss his high school plans with his parents. Shortly after the booklet has been issued, all parents are invited to a general meeting to discuss the overall C-I program, and to have any questions answered by the faculty.

Students then select one of the four possible curriculums (or individual variations of them) in consultation with parents and school counselors.

The guidance booklet itself provides an excellent picture of the C-I plan and answers many of the questions that both child and parent might be expected to ask.

The booklet is not unlike a college catalog. It explains the C-I program, listing the minimum requirements for graduation and noting the credit given for various core and interest courses. Detailed information on courses and registration procedures for seventh, eighth and ninth grades is given.

The four basic curriculums are outlined and all elective subjects, under both core and interest, are listed. Four pages are devoted to brief descriptions of the contents of each interest course (*see box*).

Finally, information is given regarding the necessary qualifications and specific entrance credits required for admission to professional and practical nursing schools, and 40

different junior and senior colleges.

As a result of the guidance booklet, and discussions with teachers and counselors, the incoming freshman has a clear picture of what his overall high school program will be, and what it will mean to him in terms of fulfilling his post-high school plans.

Results of the program

Some of the values of the C-I program are obvious: Every student, regardless of his intellectual capabilities, is offered a broader educational menu than is possible under a stereotyped curriculum plan.

If Johnny is weak in reading ability he will take remedial reading as an interest course, for two years if necessary. A trained instructor will diagnose his difficulties, remedy defects, and attempt to instill in him a love of independent reading. As a second interest course, because he likes to work with his hands, Johnny may take woodworking under the industrial arts instructor.

Susie, on the other hand, dreams of becoming a writer. She is highly intelligent and industrious. She is in an accelerated English class and takes journalism as an interest course. Eventually, as a senior, she may claim one of the prized places in creative writing, a class which publishes its own periodical containing original poems, short stories and essays.

Introduction of the C-I program has had ramifications throughout the entire school system and not just at the high school level. One of the effects of the program has been the decrease of study hall periods and the subsequent increase in the time that must be spent at home on homework assignments.

Administrators, teachers and parents all believe in the value of such self-discipline. Even the students, who could normally be expected to balk at larger homework loads, have been so conditioned to the value of scholarship that homework is often regarded as a good chance to practice skills, rather than as an onerous job to be gotten out of the way as fast as possible. Citizenship generally has improved and the hold-

ing power of the schools has increased tremendously.

In terms of more measurable factors, here is a summary of the record achieved by the 389 members of the 1958 graduating class—and this record is typical of classes graduating since the C-I program was initiated a decade ago.

1. On the basis of national norms, Broughton ranked with other high schools throughout the country in the sequential tests of educational progress as follows:

Reading	93rd percentile
Writing	95th percentile
Mathematics . .	92nd percentile
Science	95th percentile
Social Studies . .	98th percentile

2. About 75 % of the graduates entered colleges and universities, with an additional 10% entering business, nursing and other vocational schools.

3. Ninety-three of the 389 graduates—almost one-quarter—maintained a numerical average of 90 or above for the entire four years of high school.

4. There were 42 seniors who won more than \$110,000 in scholarships to various colleges and universities. This is the actual cash value. The total would have been much higher had not some of the scholarships been honorary due to the income level of the parents. Only about \$6,000 of the \$110,000 total represents scholarships that are local in character, open only to Broughton graduates. The rest were won in regional and national competition. Included were:

- Three National Merit scholarships
- Four Naval ROTC scholarships
- Two Harvard scholarships
- Two Duke scholarships
- Two University of North Carolina scholarships
- Three Wake Forest scholarships
- Four North Carolina State scholarships

No educational program can be completely and objectively measured. But Raleigh public school administrators believe that through the core-interest plan our high school students are receiving a better and more meaningful secondary education.


End

What are others doing to improve their local schools? Here is a further report of a joint research program that will make available to school boards and superintendents information on new approaches to utilization of facilities.

IN

EDUCATION

For your convenience
article is perforated



■ ■ ■ The following case histories are reported as a part of a joint research project with the education committee of the Massachusetts Association of School Committees.

In this and future issues, we will report as many good examples of educational research being conducted at the local school district level as we can obtain. The continuing success of the program depends on the willingness of readers of this magazine to *share* their own experiences with others.

With this in mind, we suggest that you ask yourself, right now, "What are we doing in our district that can be of help or reassurance to other districts struggling to improve their schools?" Then glance through these few criteria of what we are seeking:

1. Any program that makes better use of teacher abilities.
2. Any program that breaks away from traditional concepts of class size and space utilization.

3. Any program that makes better use of the very limited number of hours in the school day.

Ground rules: Your report need not be a long one. You can use the form incorporated in this article or write us a letter. Your experiment need not be a proven success. This is *Research*—and the very word "research" presupposes the right to fail.

Please address your material to "Explorations in Education," in care of this magazine.

NON-SCIENCE TEACHERS LEARN TO TEACH SCIENCE

IN AKRON, OHIO, junior high school social science teachers are learning to teach physical science under a laboratory experiments seminar being conducted by the school system.

Akron was faced with an acute shortage of science teachers and laboratories at the seventh and eighth grade levels. After consultation with science teachers in the system, Superintendent Martin Essex decided it would be possible to develop a standard set of experiments that would form a basic science curriculum for the seventh and eighth grades.

A group of experienced science teachers, under the direction of Akron's resource teacher for science, developed a set of simple experiments to be used in the classrooms.

Last summer a two-week seminar based on these ex-

periments was given to 22 eligible non-science teachers. They were reimbursed for their time in taking the 70-hour course at the rate of \$18 per day. This fall 66 more teachers, in two sections, are also learning how to present the physical science experiments.

At the same time that they were training non-science teachers to present scientific experiments, the Akron schools tackled the problem of providing needed facilities.

A model table-like mobile laboratory was built and then the schools contracted with a manufacturer to have 18 duplicates made at less than \$200 apiece.

Each of the mobile laboratories was outfitted with \$600 worth of equipment and supplies, enough to teach elementary physics and chemistry at the junior high schools lacking regular laboratory facilities.

Superintendent Essex is pleased with the new science program, especially with the idea of having social science teachers trained to teach some basic physical science. Explaining that since 1953 the studies of his-

tory, geography and science have been combined in Akron's schools, he said "We can no longer isolate science. It has become inter-related with government and everyday living."

Reported by the Cleveland Plain Dealer.

EARLY DRIVER TRAINING TO SAVE HIGH SCHOOL TIME

THE CACHE, OKLA., ELEMENTARY SCHOOLS have inaugurated a policy which not only saves teachers' time at the high school level, it may save their lives.

Instead of waiting until students are 16 to start teaching them how to drive, the Cache schools are putting small cars into each of the elementary class rooms along with curriculum guides and other aids.

The object of this experiment is to cut down on the time needed to teach driving in the upper grades by teaching youngsters good practices rather than letting them pick up bad habits before they get professional training. "Otherwise," says Superintendent T. E. Lauderdale, "bad habits are so ingrained into the student that driver education is a process of unlearning the bad and relearning the good."

Posters on safety, traffic light stanchions, guides on hand signals, one way street signs and discussions of pedestrian rights are used to give students in the first

through sixth grades a good background in driving methods.

Reported by T. E. Lauderdale, superintendent, Cache, Okla.

SCHOOL BOARD FINANCES ITS OWN EXPERIMENTS IN TEACHING GIFTED

JUNIOR HIGH SCHOOL STUDENTS in Yorktown Heights, N. Y. are getting an opportunity to do advanced work this year under a grant set up by their own board of education.

At the same time, senior high school students seeking advanced placement in colleges are getting an opportunity to qualify because of voluntary extra work undertaken by their teachers.

"If we don't do something for our able students, who will?" asks Supervising Principal Mildred Strang. "We must do whatever we can to help them get into a college of their choice and we can't wait for somebody outside the schools to help us."

Yorktown Heights' able seniors are being given an opportunity this year and last, to work an extra hour each day on a tutorial basis with teachers in the field in which they wish to seek advanced college credit.

It works this way: A student expresses an interest in

Here's what we're doing in our district

SUBMITTED BY _____ TITLE _____

SCHOOL DISTRICT _____

ADDRESS _____ CITY _____ STATE _____

RETURN TO: *Explorations in Education • School Management • 22 W. Putnam Ave • Greenwich, Conn.*

BUY CHART



General NOW OFFERS POPULAR PRICE QUALITY-ENGINEERED FLOOR MACHINES!

BE SURE TO SEE GENERAL
BEFORE YOU AUTO-MATE
YOUR FLOOR MAINTENANCE!



**GENERAL KC Extra Heavy Duty
Machines with all these
deluxe quality PLUS features:**

1. FULLY ADJUSTABLE HANDLE.
2. BIG 6" SEMI-PNEUMATIC WHEELS.
3. LUXURIOUS WHITE RUBBER WRAP-A-ROUND BUMPER.
4. DUAL AUTO-MATE SAFETY SWITCH.
5. NON-MARKIT GREY RUBBER CORD.
6. UNSURPASSED FUNCTIONAL DESIGN.
7. HEAVY DUTY CAPACITOR-START TYPE MOTOR.



GENERAL KL
Dyna-Craft Mid-weight Machine.

13" diameter
operating brush
spread. Portable!

Full range of sizes —
from 13" to 23" diameter
operating brush spread.



GENERAL Heavy
Duty Wet and Dry
E-CON-O-VAC
Commercial
Vacuum Cleaners.

**GENERAL TWIN BRUSH
MACHINES**
T-16B—for Motels, Stores,
etc.
Twin-12A—for Home use.

BEFORE YOU BUY, SEE GENERAL! There's a BIG difference in
floor maintenance equipment!



General FLOORCRAFT, INC.

421 Hudson St., New York 14, N. Y.

Established 1930

World's Most Complete Line of Industrial and Household
Floor Maintenance Machines and Vacuums

All Sizes for All Types of Floors — Made by Floor Machine Specialists

DON'T WAIT
—AUTO-MATE
your floor
maintenance!
Mail coupon
for details.

- () Have Distributor call on us.
() Send complete information, literature and prices.
() Floor Machine () Vacuum

COMPANY _____

STREET _____

MY NAME _____

TITLE _____

CITY _____

STATE _____

SC-11

(Circle number 712 for more information)

seeking advanced placement in history. The guidance department, in consultation with other faculty members, decides he is able to handle the work. Then an individual history teacher is approached and asked if he would be willing, on a strictly voluntary basis, to undertake the extra work. So far every teacher asked has agreed to carry the extra load.

Last year, the first of the program, just three students took this tutorial work. All obtained advanced standing, including one who received eight college credits in chemistry for his work. This year many more students are working under the program.

However, the program itself will not be formalized for four years. That's when members of the present eighth grade, who are this year getting an opportunity to do ninth grade work, will be seniors. Then there will be a large organized group of seniors ready and able to do advanced work.

This latter program, instituted at the seventh and eighth grades to allow able students to move ahead at a faster pace than their classmates, is being financed by a grant from the local board of education.

A total of \$13,500 was voted by the board for experimental work in training gifted students. Designed to give impetus to an enrichment program, \$10,000 of the grant is being used to purchase new books and teaching materials, including the complete filmed chemistry course produced by the Encyclopedia Britannica. The rest of the money was provided so that the school's department heads could spend last summer making comprehensive plans for the new program.

To prepare for enrichment programs, six heads of academic departments were sent to Advanced Placement program conferences. These six then worked through the summer with members of the administration and school library staff to put the enrichment program into concrete terms for the Yorktown district.

Among specific projects carried out by the committee during the summer was standardization of certain skills and techniques, such as methods of study, so that the requirements of each individual teacher on her students might more closely parallel requirements set up by her colleagues.

At the same time the committee undertook to define for the district some common terms used in testing, such as "discuss," "compare," and "show the significance of," so that all teachers and all students would agree on their meaning.

The committee also established ground rules for individual research projects for students and undertook to revise testing and marking procedures to weight grades to differentiate among different track levels.

*Reported by Mildred E. Strang, District Principal
Yorktown Heights, New York.*

JUNIOR HIGH STUDENTS GET CONCENTRATED COUNSELING

EVERY SEVENTH AND EIGHTH GRADE STUDENT in the Ticonderoga, N. Y. school system, receives a concentrated dose of group counseling in a program designed to cut down on high school failures.

Under the plan each member of the two grades has a 10-week "course" in counseling. During that time,

the group meets three times a week with a guidance counselor.

Subjects discussed in the group sessions include what to expect in high school, how to study and how to select proper courses.

These group sessions, together with individual conferences, give the guidance counselors a much greater knowledge of the students and also bring the students closer to counselors they otherwise might see only when there was trouble.

The plan is expected to cut down greatly on incorrect programming, drop-outs and failures at the high school level.

At the same time the group guidance program has given the teachers and administrators a better understanding of the junior high school academic program as the students see it.

Armed with this information, and financial aid from The International Paper Co. Foundation, the schools are carefully reviewing and revising their programs at the junior and senior high school levels.

The grants from the paper company have made it possible to hire outside consultants, institute a greatly expanded testing program, build up a professional library, write-up courses of study and hire substitutes so that teachers can attend professional conferences.

All of these steps, combined with the strong counseling program, can be expected to improve the educational offerings of the schools.

Reported by George F. Burroughs, principal, junior-senior high school, Ticonderoga, N. Y.



**You don't have to
do this with**



**CLOSED DECK
"ROLL-OUT" GYM SEATS**

Besides being easier and more economical to clean and maintain, they are **safer**. Hussey's **exclusive** box girder construction and new **positive** locking device give extra security. These are two reasons why 60 out of 64 leading U. S. architects state they **prefer** closed deck seating. Only Hussey manufactures Closed Decks.

Write for FREE catalog

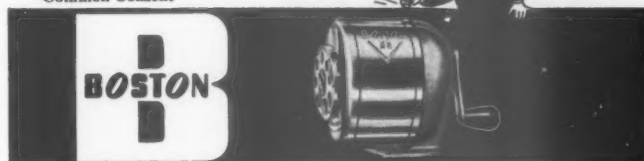
Hussey Mfg. Co., Inc., 585 R. R. Ave., North Berwick, Maine

(Circle number 713 for more information)

NOVEMBER 1958

COMMUNI
CONSENSU*

*Common Consent



BOSTON KS
for general classroom use

PERFORMANCE—unequalled
IMPROVEMENTS—positive mechanical lock on 8-size pencil guide
CLEANLINESS—no fall-out, nickel-plated receptacle stays put
STRENGTH—rugged "bridge-like" frame, steel rack
EFFICIENT—25% more cutting edges, consistently produce clean, sharp points without waste



BOSTON RANGER
for drawing rooms and heavy duty

- 3 points—outside adjustment
- heavy-duty double bearings for Speed Cutters assure perfectly centered points
- easy-locking stainless receptacle
- takes 6 pencil sizes—no waste

Free comprehensive report on sharpeners in schools, Booklet SM.

BOSTON
PENCIL SHARPENERS

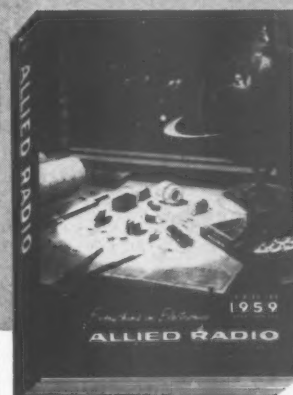
C. HOWARD HUNT

PEN COMPANY

Camden 1, New Jersey

(Circle number 725 for more information)

everything in electronics for the SCHOOL



free

**ALLIED'S
452-PAGE 1959
CATALOG**

**get the most widely used
ELECTRONIC SUPPLY GUIDE**

Make us your *complete, dependable* supply source for all your electronic equipment needs. We specialize in supplies for training purposes: see our exclusive KNIGHT-KITS—unsurpassed for quality and value. Depend on us for time-saving, money-saving electronic supply service and personal help. Write today for the FREE 1959 ALLIED Catalog—your best Buying Guide to everything in Electronics.

our 38th year

Specialists in Electronic
Supply for Schools

World's Largest Stocks

featuring ALLIED'S own
knight-kits
for Electronics Training

- Test and Lab Instruments
- Hi-Fi Audio Equipment
- Recorders & Accessories
- School Sound Systems
- Tools and Books
- Tubes and Transistors
- Thousands of Parts



send for
FREE catalog

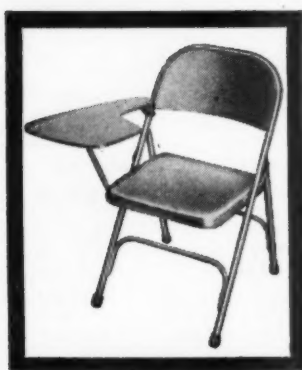
ALLIED RADIO

100 N. Western Ave., Dept. 103-K8, Chicago 80, Ill.

(Circle number 736 for more information)



John J. Duggan Junior High School, Springfield, Mass.



in the best places...

Hampden Public Seating!

School, church, office, for every room where people meet, Hampden builds a better chair. Sturdily constructed and decorator designed for each specific public seating need, Hampden gives your budget a break, too. For detailed information on the most complete line of adult and juvenile folding furniture, write today direct.



Easthampton, Massachusetts
Department HS-17

Distributors throughout the United States

(Circle number 700 for more information)

CHARTING the school budget

This simple method helps a school board anticipate, and plan for, unusual seasonal costs.

By MARTIN F. BEAVERS,

Chairman, Dalton, Mass. School Committee

■ ■ ■ Planning and accounting for the school budget is one of the major problems and responsibilities of a school board.

More often than not, school administrators are not trained in accounting and most towns and communities cannot afford the services of an accountant.

To keep the school board posted on the expenditures and the general status of the school budget, the usual procedure is for the administrative finance officer or clerk to prepare for the board a very formidable and impressive set of figures showing the budgeted amount of each item, the amount spent during the current month, the amount spent to date, and the balance. From this array of numbers the board can look at the itemized columns and try to figure out whether the amount spent to date is a proper proportion of the sum budgeted for the particular category.

Unless a thorough study is made of the monthly expenditures, it might be assumed that the expenditures each month should be uniformly distributed throughout the school year. In some categories, such as General Control Expenses, the rate of expenditure is essentially uniform. Most other categories, however, are seasonal expenses. For example, expenditures for teachers' salaries are quite uniform for the nine-month period from September to June, then drop through the summer months. Maintenance and repair expenditures run high during the summer months and vacation periods when the buildings are vacant. Fuel bills run low during the spring, summer, and fall, but are at their highest during the winter months.

Controlling seasonal expenses

To obtain a better understanding of the pattern of expenditure rates of the many items in our budget

throughout the fiscal year, our board suggested that a month-by-month study be made of the various categories in our school budget over the past 10-year period. Since the amount of the budget usually changed every year, it was found desirable to express the monthly expenditures as a percentage of the annual budget for each category.

This information was studied and the *maximum* as well as the *minimum* expenditure for each month was plotted on a sheet of graph paper for each category. A few of these charts are illustrated (see Figs. 1-4). The upper curve represents the *maximum* expenditures and the lower curve represents the *minimum* expenditures, month by month, to be expected throughout the fiscal year for the various categories. The fiscal year for our school system is from January to January for accounting purposes to coincide with the town's fiscal year. However, the charts could be plotted over any 12-month period desired; the general idea is still the same.

Each of these charts serves as a master expenditure guide for a given category. To use these expenditure guide charts, the total amount expended or committed up to the month being reported is entered on the appropriate guide chart as a *dashed line*, as illustrated. Sufficient copies of each chart are then duplicated for each of the board members and other interested parties for their inspection. A quick glance at these charts will show the relative order of expenditures and commitments in each category compared to previous years. Generally speaking, if the dashed or current expenditure curve lies between the upper and lower curves, all is well and, as the statistician would say, is in control.

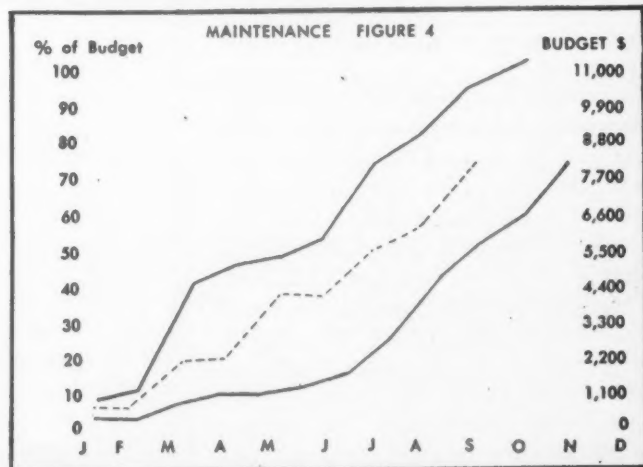
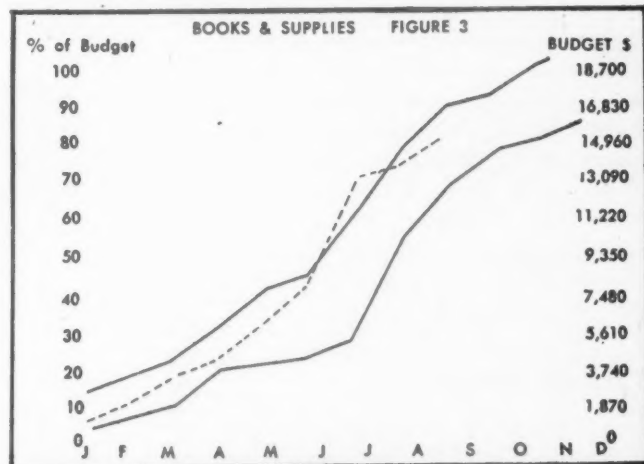
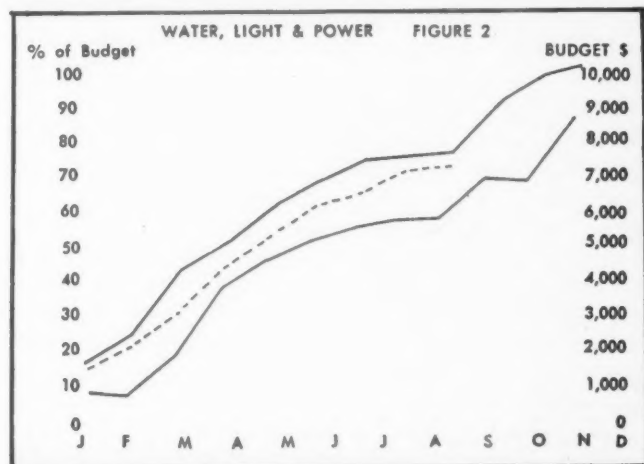
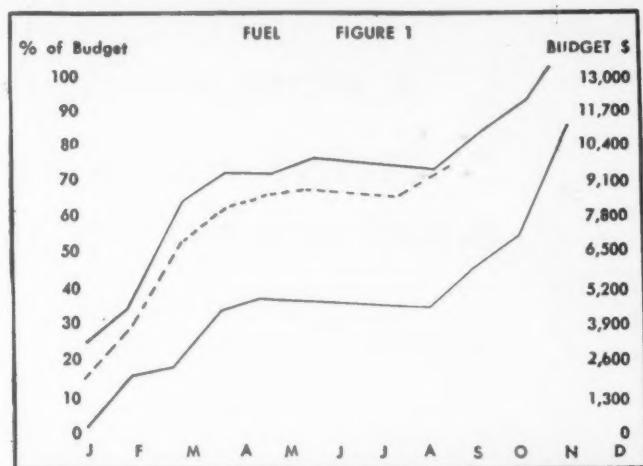
Overspending is flagged

Occasionally, however, one or two items will indicate an excursion outside the upper or lower limit curves, as illustrated (Fig. 3) for the month of July. These excursions certainly should be questioned, but it will usually turn out that there were unusual circumstances which occurred that month in a particular category. For example, the books and supplies might have been delivered earlier and in a larger group than usual. In such a case, the curve will undoubtedly indicate a normal expenditure rate the following month as is illustrated for the month of August, showing that all is well again. It is when the dashed curve continues to stay above the upper limit curve for two or three consecutive months that steps should be taken to cut back on expenditures in that category unless there are good and sufficient reasons for accepting the high expenditure rate.

This system of charting the school expenditures for the Dalton Public Schools has proved immensely helpful in reducing the time spent by the school board on this item on the monthly agenda.

The examples given herein are purely for illustrative purposes. By studying the monthly budget records of your own school for the past several years, or even the past two or three years, the school record clerk can readily produce similar expenditure guide charts for the members of your school board, who undoubtedly will also appreciate this method of charting the school budget.

End



A MODERN CONCEPT FOR Heating, Ventilating and Cooling of Schools

By F. J. KURTH, Vice President
in Charge of Engineering, Anemostat Corporation of America

Educational efficiency

The Anemostat Dual Duct High Velocity System provides a controlled and healthy environment in accordance with the highest standards of comfort and is therefore conducive to more vigorous activity in the classrooms. It is a modern heating and ventilating system, carefully researched and new in concept, and is economical to install and operate. It is an effective heating and ventilating system, which later can be readily adapted to air conditioning by the addition of a central-station type refrigeration system.

Because large sums of money must be spent for new schools, it is important to study all factors which will improve educational efficiency. Though well constructed and equipped, many new schools are not provided with modern heating, ventilating or cooling systems which furnish comfort during all seasons of the year. Experience has shown that a proper climatic condition will improve student and teacher efficiency to the extent of a cumulative gain of approximately twenty percent.

System design

First the volume of air required for a classroom must be determined. In most communities this is regulated by local codes on a cubic foot per pupil basis.

Although requirements vary in different localities from ten to thirty cubic feet of fresh air per minute, there are other factors which must be considered: for ventilation purposes, when cooling is not used, a large volume of air will, of course, do a better job than a small volume; however, the introduction of from 1000 to 1200 cubic feet of air per minute is adequate. If air conditioning is installed, the engineer may specify air temperature differentials of 30° or more between the supply air

in the cold duct and the room temperature—Anemostat Air Diffusers will diffuse air at high temperature differentials without draft.

Location and type of units

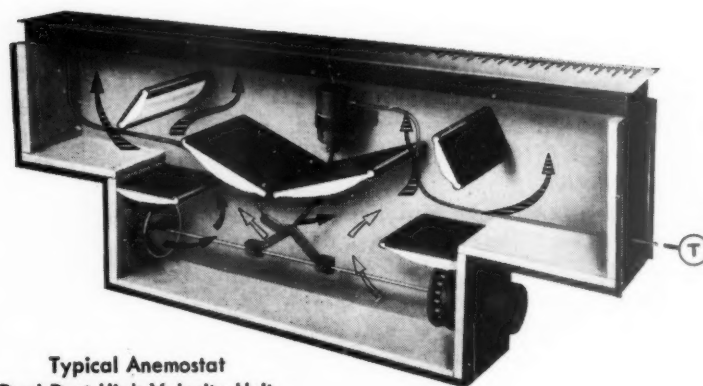
The location of the units in the classroom is determined by the climate of the community in which the school is located and the construction of the school with particular reference to glass areas. When winters are severe the *under the window type units* must be used and two units per classroom should be installed as shown on the layout. The

return air can be moved through corridors, ducts in corridors or exhaust plenums in the corridor ceilings.

In schools in mild climates or in colder climates where double glazing is used, the *sidewall units* will do an excellent job of year-round heating, ventilating and cooling. Two units providing from 500 to 600 CFM each per classroom are recommended. The return air can be returned to the fan through corridors, corridor ducts or plenums.

When two units are installed in a classroom, both are controlled by one

The Basic Principle of Anemostat School Units



Typical Anemostat
Dual Duct High Velocity Unit

The illustration shows a high velocity unit designed for a dual duct system for either heating and ventilating or complete air conditioning. To maintain ideal conditions, air is evenly and draftlessly diffused at high velocity throughout the classroom at controlled temperature; one duct carries cold air from the outside of the building, or cold air cooled by coils and mechanical refrigeration, the second duct carries warm air, which consists of a mixture of fresh and recirculated air heated by hot water or steam coils from heating boilers or by hot air furnaces. The thermostat in the classroom opens the hot air valve and closes the cold air valve, or vice versa depending on the room temperature requirements.

thermostat which should be located on an inside wall.

Ducts

The ducts can be installed in various ways depending on the type of structure: beneath the floor, on classroom or corridor ceilings, in roof spaces or on top of the roof. If tile or transite pipe is used the ducts can actually be buried in the ground. Because no water or steam is used, the ducts can be run

in practically any space, as corrosion or trapping is not a problem.

Equipment room

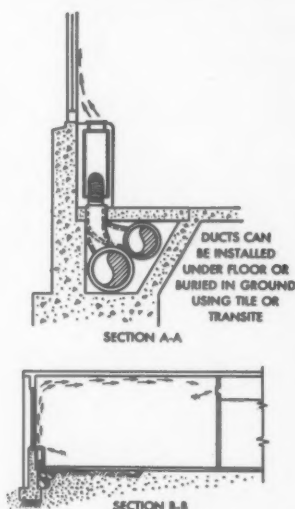
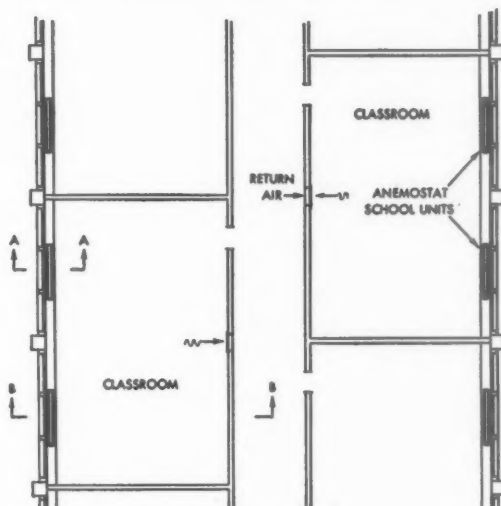
For reasons of economy, the fan room or rooms should be so located as to keep the duct runs as short as possible. However, there is no problem in running ducts long distances; dual duct systems in commercial buildings often have duct-runs of over 500 feet. The fans are usually of the Class II type

and can be either the forward or backward curve type. Consideration should be given to fans of the air-foil type, which are designed for quiet operation at high pressures.

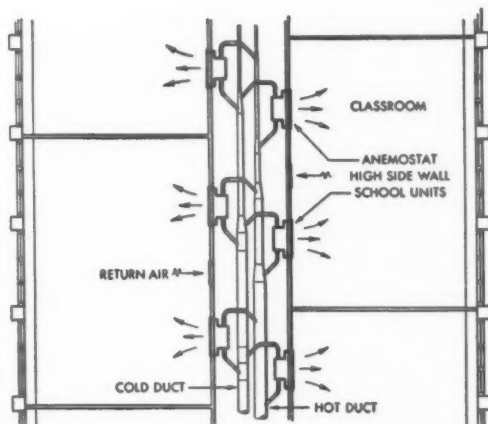
Mechanical or electrostatic filters are generally used in high class commercial buildings and should also be considered for schools. Clean, filtered air properly diffused at controlled temperature is the answer to health and comfort in classrooms.

TYPICAL CLASSROOM LAYOUTS

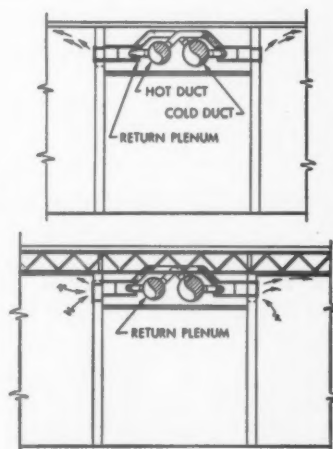
High Velocity
Under the Window Units



High Velocity
High Sidewall Units
Installed in
Corridor Ceiling



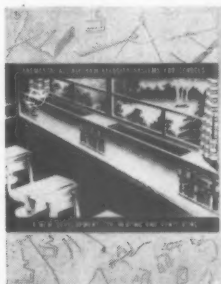
Typical Sections
Showing High
Sidewall
Type of
Installation



Advantages of the Anemostat Dual Duct High Velocity System

The Anemostat dual duct high velocity air distribution system for heating, ventilating and cooling is ideal for all types of classrooms from kindergarten through college. It offers many important architectural and engineering advantages:

1. Low First Cost
2. Low Maintenance Costs
3. Draftless Air Distribution
4. Eliminates Window Down Drafts
5. Scientific Temperature Control
6. Easily Adapted to Future Air Conditioning
7. Quiet Operation
8. Rugged Construction
9. Meets All Code Requirements
10. Pressure Balanced
11. Meets Modern Architectural Design



New Anemostat School Catalog

contains complete data on Anemostat Dual Duct High Velocity Units. Write for your copy to

Anemostat Corporation of America

10 E. 39 Street, New York 16, N.Y.

(Circle number 717 for more information)

School-park cooperation saves district money



Lombard, Ill., is building its schools and parks together so that they can make use of each other's facilities.

By JEANNE F. RIDGWAY
School board member

■ ■ ■ Schools and parks cost a lot of money. How to build enough of each—plus the outdoor play areas needed around schools—without overburdening taxpayers, is a common problem. In today's burgeoning suburbs, where populations are growing fast and tax rates are growing even faster, the problem is frequently a critical one.

Lombard, Ill., has evolved a practical and effective solution that has already saved the taxpayers an estimated \$200,000 in the past three years. The Lombard plan involves building adjacent schools and parks. The park space is used as an outdoor recreational area for the children and indoor school facilities which would otherwise have to be duplicated, are used by the park. This simple device

is one that any district can duplicate.

Lombard, a town of 22,000, is located just 20 miles west of Chicago. In 1946 the population figure was 7,000, and included 600 school-age children. Today there are 3,000 youngsters enrolled in the town's school system. Five schools have been built since 1946, most of them of the starter type and additions were made to two existing schools. A junior high school was built, an addition added, and today another wing is necessary.

Faced with what seemed to be ever-increasing budgets for school plant facilities, Lombard's school board and Superintendent Glenn Westlake stopped to take a breath in 1955. Plans for yet another new school were in the works, and the

best location was apparently next door to an existing town park. This gave Superintendent Westlake an idea. Why not use the park as a recreational area for the school? In turn, the school building itself would be designed to make certain indoor facilities readily available to townspeople using the park.

Westlake went to the park board with his suggestion.

Lombard has long been noted for its beautiful parks. Lilacia Park, for example, is nationally known for its May lilac and tulip festival. In 1946 the park board had recognized that Lombard was destined to grow in population, and had begun a program of land acquisition that would insure sufficient park areas for the future. Thus the park board, too,

was faced with ever-increasing expenditures in its efforts to insure ample park areas for the town. Westlake's plan seemed to be the answer: the park budget could be spent for land and landscaping and the schools could be depended upon for the necessary indoor facilities.

Park View school

The first school-park experiment began with the proposed 1955 school. Barry & Kay, architects for the school board, adopted ideas proposed by Superintendent of Parks Richard Moulds, and the reciprocal-use theory began to take shape. The school itself was built on a three acre site adjoining a seven acre park. Outdoor playground equipment already in the park was relocated to bring it closer to the school.

Park View opened in September of 1956, with a kindergarten and four rooms. Since then an addition has expanded the school to nine rooms and plans are underway for an additional four or six classrooms.

From the beginning the school was planned to offer facilities to the

next door park. One parking area serves both. A large all-purpose room with an adjoining kitchen is accessible from the park or the parking area. Toilet facilities can be entered from the park without going through any part of the school itself.

On the other hand two baseball fields as well as playground equipment—swings, slides, seesaws and sandboxes—were located in that section of the park closest to the school.

The net result is that the parks have more extensive facilities than they could otherwise afford, and the schools have larger play areas than would normally fit into their budget. An extra bonus for the schools is the superior landscaping job planned and maintained by the experienced park personnel. This mutual help system extends from landscaping through the maintenance of equipment to winter snow removal. Only one set of tools is required for each school-park set-up, just as each requires only one set of playground equipment.

Once the idea of cooperation between the schools and the parks had

taken root, the program branched out into new fields. For example, there is a year-round recreational program sponsored by the parks and directed by the school system's physical education instructors. An inter-school game program is always in progress; basketball, baseball, track, football, whatever the season dictates. Parochial schools, incidentally, are included in this program.

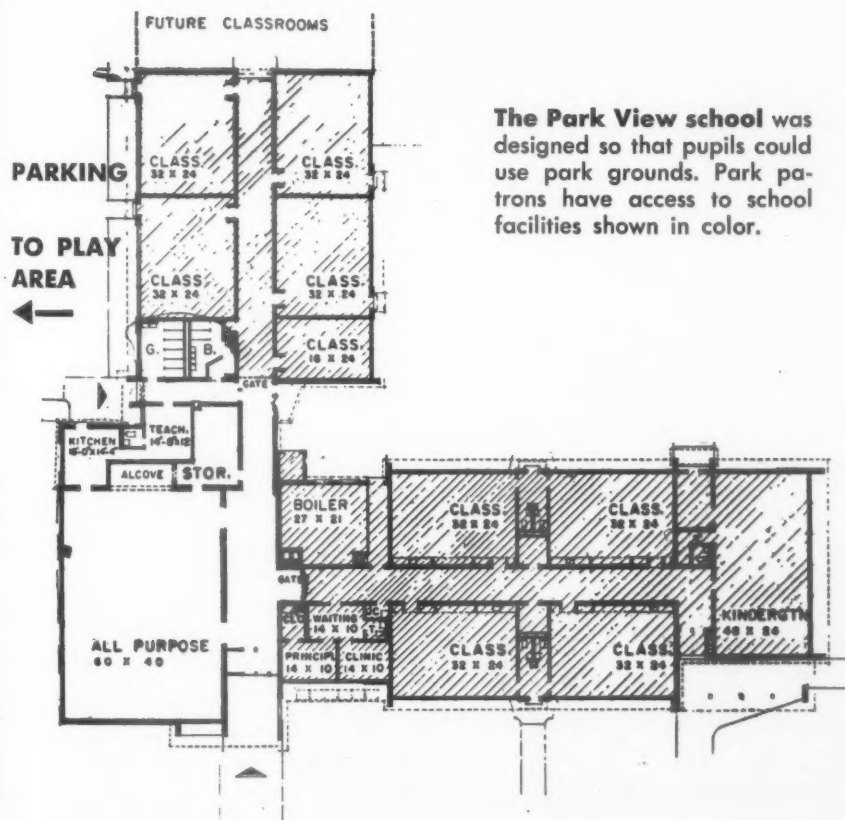
During the summer months the pace is stepped up to a five-day-a-week schedule. Games, sports contests, and various arts and crafts activities are sponsored by the park board, with school personnel providing the guidance and supervision. In hiring teachers for school-year positions, Superintendent Westlake attempts to find people who will also fit into the park and recreation programs. This offers a double advantage: it provides summer employment for many teachers right in their own community and gives the park board thoroughly trained people, readily available and already known to the children.

Another offshoot of park-school cooperation has been the adult activity program. Two semesters of classes are offered two evenings a week during the winter months. The schools supply the space and custodial service and the parks pay the personnel, many of whom are teachers or administrators in the schools. A small tuition fee is charged to cover expenses. Last year 26 classes were offered to a total of 375 adults.

The cost

Exclusive of equipment, but including land, the Park View School with its present nine rooms, has cost \$321,500. The park board spent approximately \$20,000 to prepare the adjoining park grounds.

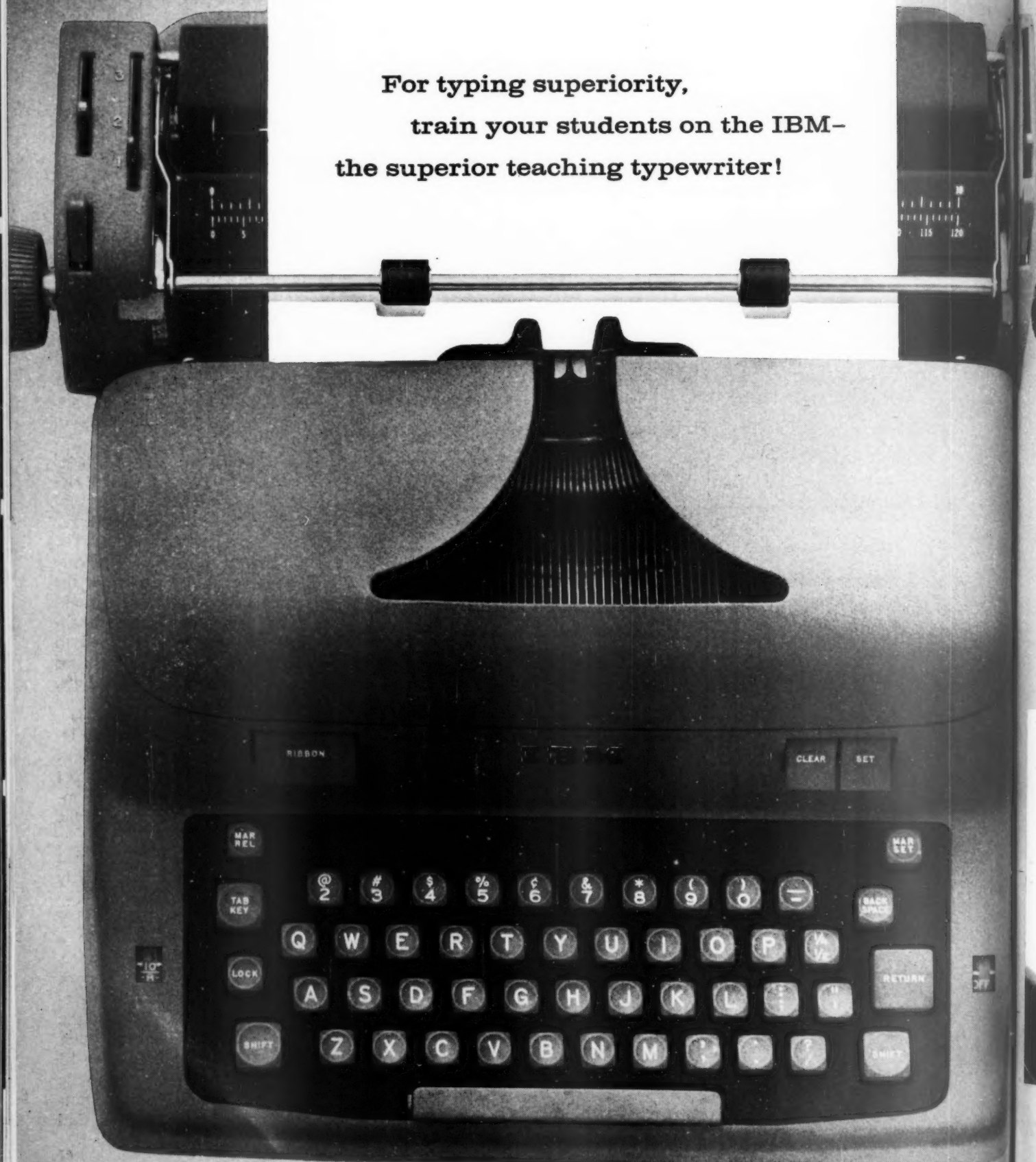
Lombard believes that the plan has more than proven itself. Early this year architects Barry & Kay drew up plans for the Peter Hoy school, a five-room building on a two-acre site. Cost: about \$135,000. But right next door is a 22-acre park which, with the necessary improvements will add about \$65,000 to the cost. Both the Park View and Peter Hoy Schools will eventually have 13 to 16 rooms, and each, thanks to the Lombard plan, will have ample outdoor play space for the children. **End**



The Park View school was designed so that pupils could use park grounds. Park patrons have access to school facilities shown in color.

super

**For typing superiority,
train your students on the IBM—
the superior teaching typewriter!**



25 YEARS AGO IBM introduced its first electric typewriter... this year IBM continues its

Priority



From classroom to office, the switch is to electrics—and IBM is the favorite by far!



Today the modern business trend is decidedly in favor of electrics—and the IBM is the outstanding leader! That's why it's so important to train your students on the electric they're most likely to use!

Another advantage of the IBM is the fact that its maintenance costs are remarkably low. That's because it's the simplest electric in design and operation—the most dependable in performance.

Your IBM representative will show you gladly the surprisingly low per-student cost of IBM Electrics for your school. Call him very soon.



IBM

**ELECTRIC
TYPEWRITERS**

leadership with its one millionth electric typewriter!

Make your classroom roomier with
3-WAY SINGER SEWING DESKS



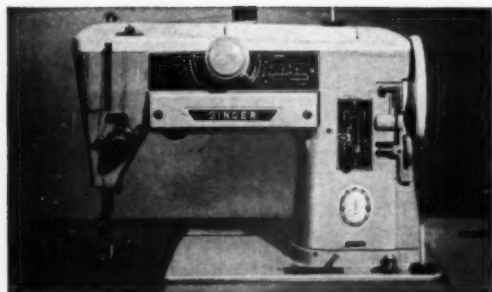
It's a sewing desk...



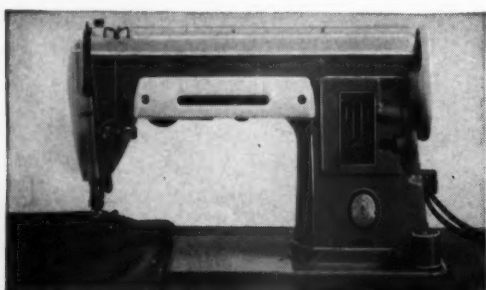
It's a cutting table...



It's a study desk!



New Slant-O-Matic 401, only combination Slant Needle and automatic zigzag machine! Finest straight stitching, and fancy stitching just by "tuning" a knob.



Slant-Needle 301, a truly practical machine! Slant needle affords superior sewing visibility. Many other new features such as fully enclosed direct gear motor.

You'll accommodate more students in less space—comfortably, efficiently—with the new SINGER Sewing Desks. Because with a SINGER 3-way desk you eliminate the need for additional cutting tables and study desks.

For sewing... the built-in SINGER* Sewing Machine is placed so you have a full 18 $\frac{1}{8}$ " to the left of the needle. *For cutting...* machine lowers out of sight, and drop leaf opens to give you a generous 43" by 37 $\frac{3}{8}$ " surface. *For studying...* drop leaf folds back and you have a perfectly smooth 43" by 18 $\frac{3}{4}$ " study desk.

And you can have your choice of Slant-Needle or Slant-O-Matic SINGER Sewing Machine heads.

For free folder on sewing desks...

and for information about SINGER Sewing Desks at a substantial school discount—as well as the special discount on a new SINGER machine for yourself, write: SINGER Sewing Machine Co., Educational Department, 149 Broadway, New York 6, N. Y.

SINGER SEWING CENTERS



Listed in your phone book under SINGER SEWING MACHINE CO.

*A Trademark of THE SINGER MANUFACTURING CO.

(Circle number 732 for more information)

How to save money on maintenance



What items in a school should be bought on quality instead of price? Here's one way to reconcile the problem: joint planning sessions between architect, staff, citizens, and custodians.

By OTTO K. FERNALLD

Editor's Note: This is the second in a series of "how-to" articles covering school maintenance. This series is based on a remarkable service supplied by the office of Carl W. & R. T. Clark, A.I.A., Syracuse, N. Y., architects, for their clients. At the completion of each of their school building projects, they supply the district with a "Maintenance and Operations Manual." The manual not only covers all general aspects of proper maintenance but is individually tailored to the specific school involved. School Management feels particularly fortunate in being able to bring you this example of purposeful and practical research.

■ ■ ■ As architects, we are often asked to justify the use of more costly materials in terms of what they will save in maintenance over the long haul. It is difficult to reduce this problem to dollars and cents. It assumes that one can accurately project experience over five years, 10 years, or more.

But some items that go into a school *are* measurable in terms of high original cost but low long-term maintenance. The time study

factors outlined in our previous article can be applied in these cases.

It is important to recognize, however, that much of this kind of comparison cannot—and should not—be reduced entirely to clinical comparison. To quote a current sales slogan, "Economy is *what you save*, not what you do without." There is an appropriate place for beauty and quality in a school, without wasting money on frills and without being able to measure them precisely in terms of maintenance.

Saving on maintenance

In the following material, we have covered some of the items that most frequently come up for discussion in writing the specifications for a school. We will deal only with those that are measurable, in one way or another, based on our experience. For example:

1. Use of plain slab doors vs. doors with glass.
2. Wall hung water closets vs. floor mounted.
3. Use of recessed trim.

4. Toilet floors on same level as corridors.

5. Receptors of pre-cast terrazzo with 6-inch curbs vs. slop sinks.

6. Ornamental decoration.

7. Floor loading incinerators.

8. Custodial storage space.

9. Translucent vs. clear glass partitions.

10. Adequate electric outlets for maintenance equipment.

11. Repair space, parts storage, custodial office and shower.

12. Wood vs. non-corrosive metal window frames and sash.

13. High grade hardware.

14. Terrazzo floors in high traffic areas.

15. Ceramic wainscot vs. plaster walls in corridors.

In making decisions on items like these, it is important to provide your architect with the opportunity to consult with your school plant managers, chief custodians, and even rank-and-file building service personnel. These people who per-



form the daily chores in house-keeping and repair should have their day in court, and it is a good idea to let the board hear from them before arbitrary decisions are made. In these discussions, ideas to simplify maintenance should be brought up and thoroughly discussed. The presence of the architect in these meetings is vital since his expert knowledge and experience can often be used to arbitrate diverse opinions.

A case in point

Recently, our firm held a series of meetings to discuss the design of a proposed new school. Participating in these discussions were the school board, a 21-member citizens building committee, school administrators, cafeteria manager, chief custodian, a building contractor who is a taxpayer in the district, a heating and ventilating contractor (also a taxpayer), several teachers and the architect. The items previously listed as examples were among those that were actually discussed during these sessions. Here, in brief form, are the decisions arrived at, and why:

1. Use of plain slab doors vs. doors with glass. It was decided to use plain slab doors wherever possible. From a maintenance standpoint, custodial time would be saved in cleaning. Glass is more demand-

ing maintenance-wise. In some places, however, it was deemed necessary to use glass as a safety factor so that people on either side of the door could see one another when opening or closing.

2. Wall hung water closets vs. floor mounted. The wall hung model was specified in order to keep the floor free for easier mopping. Price comparisons between the wall-hung and the floor-mounted showed that for the 25 water closets needed, the initial cost would be about \$1,000 less for the latter.

At first glance, this seemed like an economy. The custodian, however, estimated that a saving of 20 minutes a day could be made in cleaning time by using the wall-hung type. Based on the hourly rate of \$1.80, this meant a saving of 60 cents per day. In the 190 day school year, the saving would be \$114. The time required to amortize the additional initial cost was slightly less than nine years. In the meantime, the custodian would have 570 hours of time to devote to other tasks. The school district, potentially, could have fewer custodians, if enough items of this type were picked up—an important consideration from a management point of view.

3. Use of recessed trim. It was quite obvious to all that the fewer places there were for dust to settle the less cleaning time was required. Architects will usually specify this factor. It is necessary to point out the advantages, however, during a discussion.

4. Toilet floors on same level as corridor floors. This point was raised by the custodian who pointed out that this made it easier to take cleaning carts into the toilet rooms. The difference in cost was negligible, and long-term savings could result.

5. Floor drains of pre-cast terrazzo vs. slop sinks. A floor drain, with a six-inch curbing around it, eliminates the need for the custodian to lift heavy mop pails of water out of the sink when they are filled or emptied. The area is also easier to keep clean. Since there was no great discrepancy in cost, the saving in effort swung the decision to the floor drains.

6. Ornamental decoration. It was agreed that the reaction to decorative elements was a subjective matter, that the architect was best quali-

fied to evaluate where they were needed, and that any decorative features would be consistent with reasonable economy and ease of maintenance.

7. Floor loading incinerators. The custodian specifically requested that the school be provided with an incinerator which could be loaded, from above, through a "trap door." As in the case of the floor drain, this eases the physical burden of custodial personnel and speeds their work. The architect pointed out that the overall design of the building would be the determining factor. This type of incinerator assumes a "basement" space adequate for installation of the incinerator below the level of the first usable floor of the school.

8. Custodial storage space. In the discussion, the chief custodian had the opportunity to give his estimate of how much storage space his department would need in the new building. On the preliminary plans, this storage space was located in the areas recommended by the chief custodian. This apparently minor factor actually assumes considerable importance in saving custodial time, and—over the years—can assume major proportions in terms of cost. Not only must there be adequate space for the variety of tools used in maintenance, but the storage areas should be placed in the most favorable operating location to save the protracted travel time required in some schools.

9. Translucent vs. clear glass partitions. Glass partitions are frequently used to "borrow" light in areas that would otherwise require continuous artificial illumination. In a school, if visual supervision through the glass is not required for reasons of discipline, translucent glass will be found to require less frequent cleaning. In the school being discussed, a corridor giving exit to the cafeteria and paralleling the cafeteria was to be enclosed by a partition-type wall with glass panels. Translucent glass was specified.

10. Adequate electrical outlets for maintenance equipment. In discussing this item, the custodian asked the architect to indicate what materials would be used in various areas of the school so that he could determine, in advance, what type of cleaning equipment would be involved. Knowing this, he was able

ABOUT THE AUTHOR

Otto K. Fernald has been a school board member for 10 years. Prior to becoming affiliated with Clark & Clark, he was in the field of unit cost accounting and wage incentives. Thus, his background makes him unusually well qualified to handle the problem of maintenance as it relates to personnel.



Problem Child or...Hearing Problem Child?

2 Children in every classroom have Hearing Defects

Five to 7 percent of the pupils in any school have hearing defects which require special attention. In the average school room of 35, therefore, about 2 pupils have hearing defects. Student failures and repeated grades can cause teacher dissatisfaction, often resulting in teacher turnover. You can easily find out if the "dull" child is just a child who can't hear. The cost of setting up a hearing test program is less than the cost of one child repeating a grade. It's easy to start a hearing test program and to recommend steps to overcome the hearing handicap.

Now You Can...

Test up to 40 students

AT ONE TIME WITH

Maico MA-2 Multiple Hearing Test AUDIOMETER



**So Easy
To Carry**

from classroom to classroom

Your school nurse can easily test the hearing of groups or individuals on this Maico precision Audiometer . . . an ideal instrument to accurately locate hard of hearing pupils in a group testing program.

Lightweight and Portable

Small, compact, lightweight, the MA-2 Audiometer is easy to carry.

Sturdy carrying case absorbs normal shocks of transportation.

Write for booklet "Why & How To Conduct School Hearing Tests."

Maico

21 North Third Street
Room 122 J
Minneapolis, Minn.

(Circle number 728 for more information)



AmBridge Modular Schools

COUPON: Clip and send today for a 24-page booklet completely describing AmBridge Modular Schools. Learn how you can save valuable time, obtain high quality, and meet all educational requirements.

AmBridge Modular Schools
Room 1831C, American Bridge Division
United States Steel
Pittsburgh 30, Pennsylvania

Name

Title

Address State

City

Shall we send your architect a copy?

Architect's Name

Address State

City

Proud new school: a

About that beautiful new school you are planning to build: Wouldn't proven, precision-made steel wall panels and other integrated building components save trouble and lots of time? Wouldn't easily movable interior partitions be desirable at some future date when space rearrangement or expansion is necessary? Wouldn't permanently colorful exterior steel walls save you money?

You bet they would! You can have all these benefits—and more—in *your* next school! American Bridge Division, U. S. Steel, working with your architect, will provide sturdy, permanently colorful steel modular wall panels and other integrated building components to meet your community's educational requirements.

Quick! . . . but high quality, too! All precision-made USS AmBridge Modular Schools like this one near Cleveland, Ohio, are erected in weeks, saving valuable construction time and assuring early occu-

pancy. Built in weeks, high-quality AmBridge Modular Schools assure life-long, unexcelled service for your community.

Ask your architect. Architects have found that the modern lines of AmBridge Modular Schools blend well with the existing architectural atmosphere. Whether you need a new school or an addition, your architect can accommodate all of your aesthetic and educational needs with AmBridge Modular School Components. Suggest that he contact us for more information. American Bridge specialists will be glad to supply him with all the technical data he needs.

In order to assure quality construction, experienced American Bridge crews will erect all AmBridge Modular School Components. Our half century of experience in this field is your assurance of complete, lasting satisfaction.

USS and AmBridge are registered trademarks

American Bridge
Division of



United States Steel



Designed by J. Trevor Guy, A.I.A., Cleveland, Ohio.

THE PICTURES:

EARLY BIRDS—Left: This picture was taken in August. On September 2, the boys probably weren't nearly so anxious to get inside their new AmBridge Modular School. But, once in, they'll find that lots of natural light, color and modern beauty will help make learning a little easier for them.

A IS FOR ATTRACTIVE—Below left: The beauty of this AmBridge Modular School will always remain because the weather-tight, vermin-proof walls are made of durable steel. Permanent panels eliminate extensive refinishing and frequent cleaning. Modular construction makes expansion of this school a simple matter.

B IS FOR BRIGHT—Below center: A comfortable teacher's room—typical of the auxiliary features easily incorporated in any USS AmBridge Modular School. Interiors come in 16 colors.

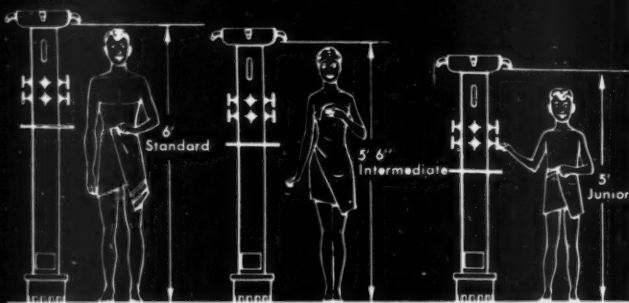
C IS FOR CHEERFUL—Below right: Everyday is a bright day in this pleasant, well-lighted classroom . . . a natural environment for study. Since steel partitions don't support roof, the room size can be changed easily at any later date.

a lesson for you?



Economical Shower Baths For Everyone . . . with BRADLEY COLUMN SHOWERS

THREE HEIGHTS



Bradley Multi-Person Showers are shipped almost completely assembled, thus save installation time and expense. One Bradley Column provides up to 5 showers with each bather having complete control of water volume and temperature.

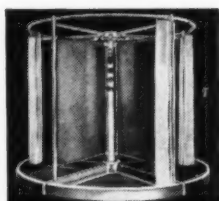
Thus for 5 showers, there is only *one* set of piping connections—not 5. Each Column has a large base casting securely located in floor serving both as anchor and drain.

Bradley Columns are now furnished in stainless steel as well as in steel with vitreous or baked enamel in white and six beautiful colors: sky blue, sun tan, mint green, forest green, citrus yellow, and French gray.

For complete specification data, write for Catalog 5601. It is yours for the asking . . . **BRADLEY WASHFOUNTAIN CO., 2343 W. Michigan St., Milwaukee 1, Wisconsin.**



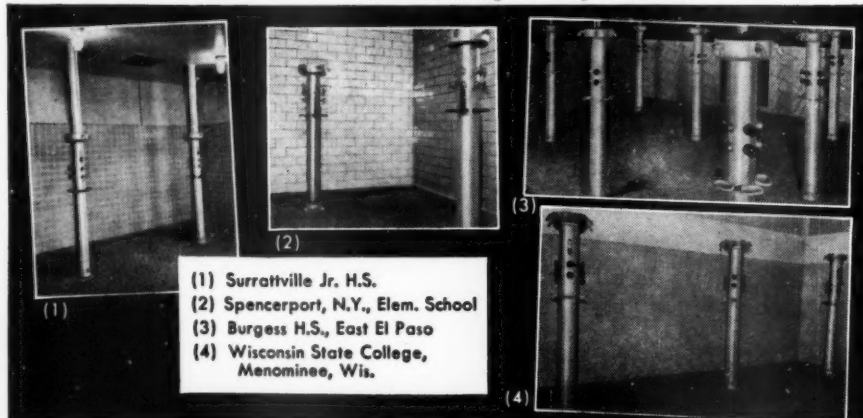
Write Today
for Cat. 5601



For greater privacy, panels separate the stalls and curtains furnished when desired.

BRADLEY *multi-person* SHOWERS

Distributed Through Plumbing Wholesalers



- (1) Surrattville Jr. H.S.
- (2) Spencerport, N.Y., Elem. School
- (3) Burgess H.S., East El Paso
- (4) Wisconsin State College, Menominee, Wis.

(Circle number 701 for more information)

to suggest logical locations for electrical outlets to accommodate the equipment without long extensions or repeated "plugging and unplugging" during the cleaning operation. (It is worth observing that a classroom teacher is often better qualified than the architect to select the position of electrical outlets in a classroom.)

11. Repair space, parts storage, custodial office and shower. In exploring these factors during the meeting, it was pointed out that the new building would be isolated from existing buildings and thus be removed from the plant's central storage area. The custodian requested that some provision for storage space be provided so that spare parts could be stored in an orderly manner near the point where they might be required. He also asked for a bench and tools so that minor repairs could be made as necessary without delay. Another interesting suggestion was made when it was pointed out that the school would have considerable use as a community center and that there would be times when a custodian would be held over in the evening to supervise the building during such activity. It was pointed out that he would want to shower and change his clothes before going on such duty. With this in mind, a small shower was provided in the custodians' lavatory. These initial costs will be more than paid back over the years by increased effort on the part of the custodian and better public relations.

12. Wood vs. non-corrosive metal window frames and sash. Outside window frames and sash, based on estimates of the contractor, would cost \$6.50 per square foot for wood sash (excluding painting and screens), compared to \$8.00 per square foot for non-corrosive metal sash (including screens and storm sash). This item was thoroughly discussed at one of the planning sessions. After the contractor estimated that the cost of painting would more than offset the difference in price, the more costly metal fixtures were specified. In general, wooden frames and sash must be painted every three years on the south and west sides of a building and every five years on the north and east sides. In addition, the metal items included screens.

13. High grade hardware. There

was little discussion of this matter after the custodians pointed out the excessive expense involved in repair and replacement costs for door hardware under the hard use given by school children. The extra cost, though not inconsiderable, is worth the investment. It is worth pointing out that even the most conscientious contractor is forced to substitute, upon occasion, from the actual specifications of the architect. In these cases, it is the architect's responsibility to insure "equivalent quality."

14. Terrazzo floors in high traffic areas. This treatment was suggested at one of the first meetings of the group. It adjourned to examine a terrazzo floor that had been installed in the old school building corridor when it was built 25 years before. They found that the floor still retained its original beauty and serviceability, and that nothing had been spent for repairs. The chief custodian advised that once a year, during the summer vacation, it was machine scrubbed and given a penetrating seal treatment. During the school year it was dust mopped daily, as were the other floors in the building. During rainy weather, when mud was tracked onto it, a damp mopping cleaned it up. It was buffed at infrequent and irregular intervals. Further discussion brought out the fact that there were many new, beautiful and serviceable floor finishes on the market today. The planning group expressed the desire to use them where the greatest benefit of long range economy would result. Cost studies showed that the initial installation cost for the terrazzo floor, with terrazzo baseboards, would be about \$1.10 per square foot. This was supplied by the contractor in the group. Asphalt tile was estimated to cost 47 cents per square foot installed. In view of the difference in the estimated cost, the contractor—being a taxpayer—was asked what he would rather see in the corridors and vestibules. He unhesitatingly chose terrazzo and stated that he would choose it even at a seemingly large price differential. It was decided to specify terrazzo in the corridors, vestibules and other areas of heavy traffic. Asphalt tile was chosen for the classrooms and areas of light traffic.

15. Ceramic wainscot vs. plastered walls in corridors. The contrac-



tor and the architect had, for the consideration of the group, estimated costs on recent bids for several different types of wall treatment. These were the figures:

Concrete block painted two coats	\$11,200
Concrete block integrally tinted	\$12,200
Hollow tile, plastered and painted two coats	\$12,600
Hollow tile with ceramic tile wainscot	\$18,400
Hollow tile with vinyl wainscot	\$15,600

Ceramic tile had been installed in the corridors of a building in this district in 1952. The usual pencil, chalk, crayon and scuff marks that showed up on the plaster walls of the older buildings in the district were not present on this ceramic surface. The custodian attested to the fact that very little maintenance had been required.

The entire planning group was sold on the idea that the ceramic tile wainscot should be used, but the members wanted some facts that they could take back to the people in the district to justify their choice of the more costly material. Further discussion brought out the fact that in the areas of the old school building where the corridor walls were plaster, it had been necessary to paint them every four years. There were 10,000 square feet of corridor wall involved in the proposed school, so painting costs were estimated as follows, using the "Price Guide of the Painting and Decorating Contractors of America, 10th edition:"

Washing, touching-up and one coat of gloss paint on smooth finish plaster:

Labor production per hour:

Washing, touching-up, 133 sq. ft. Painting, 133 sq. ft. (turn page)

monroe FOLDING BANQUET TABLES

Direct Prices and Discounts to Schools, Churches, Clubs, Lodges and All Organizations

COMPLETE CATALOG ON REQUEST

TRUCKS FOR FOLDING TABLES



Monroe TS (transport - storage) Trucks make handling and storing of Folding Tables easy and quick. Combination offers.

STEEL FOLDING CHAIRS



Monroe Steel Folding Chairs in attractive range of styles, sizes and prices. Excel in comfort, easy handling and durability. Also full line of non-folding chairs, desks and combinations for classroom, cafeteria and church school use.

PORTABLE PARTITIONS



Monroe's new movable partitions change idle space into useful areas. Smooth Masonite panels, tubular steel frames, swivel pedestals, casters or glides.

THE Monroe COMPANY
106 Church St. Colfax, Iowa

(Circle number 730 for more information)

FREE

New Audio-Visual Booklet

Presents useful ideas on all phases of audio-visual education. Covers film lessons, student projectionist training, film sources, etc. Written by a leading authority on A-V education and published as a public service by Victor Animatograph Corporation.

MAIL COUPON TODAY

Victor Animatograph Corporation
Division of Kalart, Plainville, Conn.

Please send me a free copy of "A Treasure Chest of Audio-Visual Ideas."

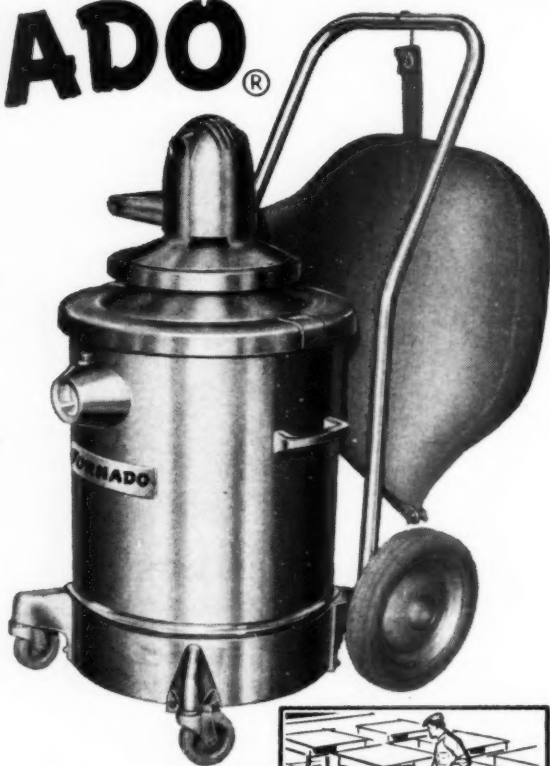
Name _____ SM-3
Position _____
Address _____
City _____ Zone _____ State _____

(Circle number 703 for more information)

MORE POWER—MORE USES FOR SCHOOL CLEANING **TORNADO®**

SERIES 400 VACUUM CLEANER

- ★ Tremendous Power
- ★ Wet and Dry Pick-up
- ★ Highly Portable
- ★ Removable
Power Unit
For Blowing and
Light Vacuuming



School custodians everywhere prefer the Tornado 400 Vacuum Cleaner. Its tremendous, dependable power, durable construction, and portability does every cleaning job faster and more thoroughly.

For wet pickup, Tornado follows the scrubber and sweeps up the suds to leave floor dry and ready for waxing. With the wide range of Tornado attachments, you can clean overhead fixtures, walls or drapes, chalk trays, lockers, halls, and hundreds of hard-to-reach spots.

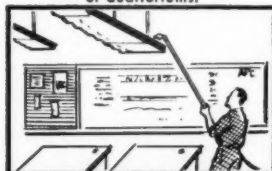
Put the Tornado 400 to work in your school, now!



Wet pickup of suds, water or any liquid.



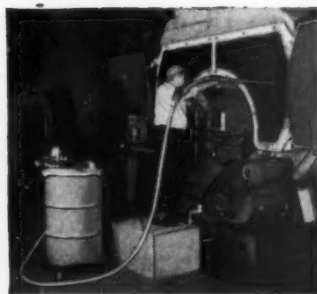
Clean halls, lockers, classrooms or auditoriums.



Overhead cleaning is fast and easy with Tornado.



Cleans chalk trays, erasers, all around the classroom.



YOU CAN'T BEAT IT FOR CLEANING BOILER TUBES

Professional boiler men use this same Tornado vacuum cleaner. Take advantage of this versatility, improve heating and cut fuel costs by cleaning your own boiler tubes regularly.

FREE cleaning survey by a Tornado cleaning engineer at no obligations, just write!

For more information, write for Tornado 400 bulletin #894.

BREUER ELECTRIC MFG. CO.

5102 N. Ravenswood Avenue • Chicago 40, Illinois

(Circle number 704 for more information)

Material coverage per gal. 477 sq. ft.

Cost of material—Gloss paint, \$6.80 per gal.

Based on wages of \$2.75 per hour, the cost of one coat, including contractor's overhead and job expense, would be 74¢ a square yard.

Total surface of 1,111 square yards would cost \$5,800 more initially than the hollow tile plastered and painted two coats. This meant then that in 30 years (the term of the bond issue) the ceramic tile wainscot would amortize the higher initial cost. During these years the wall would always have the original beauty, and the time consumed in washing marks off the wall frequently and entire washings less frequently would be saved.

Values in group planning

It is worth pointing out that the apparently minor character of many of the items mentioned above was worth group discussion. In the aggregate, they will save money. More important, however, the many people who attended each of these sessions—there were 10 meetings in all—were effective emissaries to other taxpayers in the district when the school was discussed at a public hearing. Not only was it easy to answer public questions convincingly, but many of the items never came up for public discussion because voters had confidence that the job had been carefully planned.

A further benefit of the meetings was the fact that, on several occasions, the group discussed the possible necessity for putting an addition on the as yet unbuilt school at some point in the future. The superintendent estimated that such an addition was likely to be needed in four or five years. He estimated the need as four to six additional classrooms. This permitted the architect to design in a manner that would permit a new structure to be added with minimum difficulty. Service lines were extended so that they would be ready for connection. Boiler areas were provided to supply an enlarged structure.

Shortly before this school was brought to vote, four public meetings were held where people could come to talk to the school board, the building advisory committee of 21 members and the architect. The referendum was easily passed. **End**

▶ THOUGHT STARTERS

A monthly review of ideas, new products and helpful ideas

▶ Administrators go to school to learn from pupils

Administrators in the Carle Place, N. Y., district are going back to teaching this year—in order to learn.

Under a re-education program originated last year, district administrators from the superintendent on down must teach a class once a month.

The objective of the program is to increase their knowledge of the needs, abilities and problems of the students, as well as to gain a better understanding of them.

▶ Classes in trailer relieve overcrowding

Students at the Towson, Md., high school are attending classes in a trailer to relieve overcrowding. Five classes—with a total of 230 students—are being taught in the makeshift room.

The trailer, 20 by 40 feet, was brought to the school and fixed up for classes in just three days. It sits on concrete blocks outside the regular school building with underground wires providing power for heating and light.

The trailer was called a "last resort" by Vice Principal W. Horace Wheeler. "It is just one way to keep from extending the school day or conducting classes on double shifts," he said.

Previously Towson students have been using space in the auditoriums, three conference rooms, a wash room and the gymnasium for classes. Class size averages anywhere between 30 and 50. There are 1,908 students registered at the school, more than 400 over the building's capacity.

Difficulties in using the trailer accommodations have already appeared. Administrative and traffic problems have arisen because it is not directly attached to the main building. Teachers have indicated some hesitation about using it since there is no storage space and it is necessary to carry class material every day.

Some students have noted that they cannot hear at the back of the "room," that the special desks are too small and "We're too close to the windows

and it's too easy to start thinking of something else."

Other, more philosophical students commented "at least we have a place to go and a place to sit." In many classrooms in the main building students must sit on the floor or bring their own folding chairs.

How long will the trailer classes continue? Indefinitely it seems. "We'll probably have a few more of them before long," says Wheeler. "At least it's a quick answer to a bad problem."

Measure for measure

John O'Connell, Sr., of North Massapequa, N. Y., will go to any lengths for the sake of his five-year-old son John Jr. In this case he went to a length just 160 feet more than a half mile.

The younger O'Connell, a kindergarten student, had been denied bus transportation because he lived less than a half-mile from the school. O'Connell senior challenged this statement, contending the house was outside the half-mile limit.

He purchased a tapemeasure and started a foot-by-foot measurement of his son's route to prove his point, on the way enduring the stares of curious motorists and pedestrians. "It was worth the time and trouble," the elder O'Connell said after his trip was done. "One of those streets . . . has very heavy traffic."

▶ A portrait of the superintendent

Superintendent John H. Messerli, of Marion, Iowa, writes a column called Education News for the *Marion Sentinel*. His column of Sept. 10 asked his readers just how they see him as a superintendent. SCHOOL MANAGEMENT reprints the column here and asks "Do you see yourself, or your superintendent, in any of these sketches?"

How do others sometimes see the school administrator? Browse through this portrait gallery of some superintendents caught in characteristic—if

exaggerated—poses: In your own mind see if you can classify "yours truly."

Superintendent on a treadmill—

He moves fast, goes nowhere. The curriculum is rewritten, not revised; bad practices are rephrased, not rescinded; the staff is reorganized, not rejuvenated. In short, lots of motion but no action.

Superintendent on the fence—The only thing this administrator is against is alienating people. He is affable, he is diplomatic. He rarely airs his opinions or reveals his convictions. He spends more time than it's worth wondering if everyone likes him.

Superintendent on a bandwagon—

He jumps on any bandwagon that seems to be rolling along the main highway of education. Today it is TV, tomorrow it is vocational education, next week it is merit rating. He magnifies what he thinks is a trend, letting it become the dominant, if temporary, note of his administration. He has trouble putting things in their proper relation in the school program. Since he boards and jumps off so many bandwagons, his teachers are usually confused—and angry. They don't like to be taken for a ride in a driverless vehicle.

Superintendent on a tightrope—

Like most tightrope walkers, he teeters has onlookers gasping. He is fearless, and this is to be admired. But he shares the daredevil's fondness for bravado. Though some of his actions are laudable, most are dangerous and this is rough on everyone's nerves, particularly his staff's. On closer examination, most of his actions are found to be mere spectacles for the benefit of the grandstand.

Superintendent on horseback—

Militant is the word for this administrator. His administration is a dictatorship. He cares little whether anyone likes him so long as they fear him. They do, for there is much desk-thumping when he's around. He fights hard for his staff, which is good. But just as often he fights against the staff. Vacancies are common in his school system.

Superintendent on a roller coaster—

One day he's "the most happy fella,"

**Superior Design,
Construction and
PERFORMANCE**

for greater
strength and
SAFETY!

AMERICAN
Approved
**PLAYGROUND
AND SWIMMING
POOL EQUIPMENT**

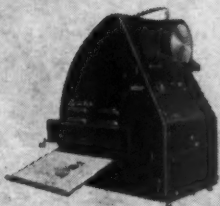
The wise choice of experienced
buyers for nearly half a century.

WRITE FOR LITERATURE

AMERICAN
PLAYGROUND DEVICE CO.
ANDERSON, INDIANA, U.S.A.
WORLD'S LARGEST MANUFACTURERS OF FINE
PARK, PICNIC, PLAYGROUND, SWIMMING
POOL AND DRESSING ROOM EQUIPMENT

(Circle number 707 for more information)

227 of the
most reputable
Audio-Visual dealers
recommend Beseler's
VU-LYTE II
Opaque Projector!



AV Experts are in a position to know.
Find out how YOUR School can im-
prove the teaching process. Write
for the new Free brochure: "Turn
Teaching Into Learning"

Charles Beseler COMPANY
EAST ORANGE, NEW JERSEY

(Circle number 708 for more information)

the next he's nursing a grouch. And so it goes, cycle after cycle of good days and bad days. Under this kind of regime, staff members waste valuable time: 1) keeping tabs on the unpredictable crotchets of the administrator 2) wondering how their "Hooper rating" is on any given day.

Words of wisdom

Students at the Byram, Conn., school know the first verse of the "Star Spangled Banner" now but they didn't when the term began.

Principal George L. B. Fraser gave all students from the fourth through the eighth grades one assignment after the first week of school: "Go home and have your parents teach you the 'Star Spangled Banner.'"

Fraser's assignment resulted from a quiz he gave the school earlier in the week. It showed that just two fourth graders and members of a sixth-grade class whose teacher had made them learn it the year before, knew the words to our national anthem.

Teachers present plan for pay classifications

A group of teachers in Boulder, Colo., has worked out a salary and rating plan designed to free teachers from a system that allows no leeway on pay.

The Boulder teachers, dissatisfied with pay scales they considered too low, formed a professional standards committee and set out to find a way to classify teachers on the basis of the amount of time and energy spent on the job.

After more than one year of study they came up with a "category-index system" which, they say, is in no way connected with merit pay plans.

They established five categories based on the responsibilities "accepted, assumed and accomplished" by the teachers, and then set up an index system on which salaries could be based.

Teachers would apply for the category they wanted but school officials would make the final decision on each teacher's classification.

Teachers in Category A, for example, would have no duties outside their classrooms except to attend staff and PTA meetings.

Category B teachers would be required to attend more meetings, and



ARE YOUR TERRAZZO FLOORS Getting Proper Beauty Care?

The value of your terrazzo floors lies in their beauty. If the wrong type of cleaning material is used on a terrazzo floor, it can mar the finish in a few month's time. Protect your costly floors . . . preserve their original appearance and loveliness with a Huntington Sealer and approved maintenance methods.

To make certain your floors are being maintained correctly and at the lowest practical cost, write for our free booklet "How To Finish and Maintain Hard Floors." Fully illustrated, with step-by-step instructions, it tells your maintenance men the right way to take care of marble, concrete, magnesite and ceramic tile floors . . . to preserve their gleaming beauty for years to come. It can save you many dollars on floor maintenance costs, too.



**WRITE FOR
FREE BOOKLET**

HUNTINGTON LABORATORIES
INCORPORATED

Huntington, Indiana
Philadelphia 35, Pa. • Toronto 2, Ontario

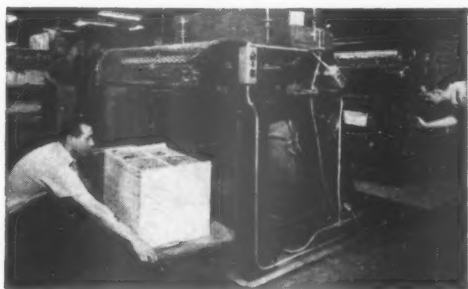
(Circle number 709 for more information)
SCHOOL MANAGEMENT



• New Du Pont vinyl "PX" cloth can be used at normal speeds on conventional blanking, stamping, casing and forming equipment.

Binders and printers can use the same inks, lacquers and adhesives which they have used with pyroxylin bookbinding material.

Your present equipment handles new Du Pont vinyl "PX" cloth for better-looking, longer-lasting bindings



• On conventional printing equipment new Du Pont vinyl "PX" cloth lies flat . . . maintains sharp register on fast-color presses. Here, a skid of printed vinyl "PX" cloth is removed from a Harris multi-color press.

Now, using new Du Pont vinyl "PX" cloth on conventional equipment, you can produce richer-looking, more colorful, longer-lasting bindings. In binding, new vinyl "PX" cloth gives you a rate of production equal to pyroxylin-coated fabric on conventional blanking, stamping, casing and forming machines. Vinyl "PX" cloth is completely compatible with conventional adhesives. In printing, new vinyl "PX" cloth lies flat and firm — maintains sharp register on fast color presses. New vinyl "PX" cloth takes ink nicely and produces snappier, sharper colors than conven-

tional bookbinding materials.

New vinyl "PX" cloth is impregnated with vinyl for superior printing and wearing qualities. It offers dramatic possibilities for rich color on covers for books, manuals, presentations, catalogs or binders. Bindings of new vinyl "PX" cloth resist breakdown at hinges and corners. In tests, new vinyl "PX" cloth proved 10 times more scrub-resistant than pyroxylin bindings of the same grade.

For free sample swatches mail the coupon or write: E. I. du Pont de Nemours & Co. (Inc.), Fabrics Div., BP-810, Wilmington 98, Delaware.

*"PX" cloth and "Fabrikoid" are Du Pont's registered trademarks for its impregnated and coated bookbinding materials. Patent for vinyl "PX" cloth has been applied for.

MAIL COUPON FOR FREE SAMPLE SWATCHES

E. I. du Pont de Nemours & Co. (Inc.),
Fabrics Division SM-811, Wilmington 98, Delaware.

Please send free sample swatches and complete data on new vinyl "PX" book cloth:

Name _____ Position _____
Firm _____
Address _____
City _____ Zone _____ State _____

**PX[®] cloth and
Fabrikoid[®]**



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

(Circle number 737 for more information)

NOVEMBER 1958

61



... WITH THE MOST COMPLETE SCHOOL ACCOUNTING PLAN

Of course, nobody really punishes an administrator with blackboard assignments.

Nevertheless, he'll save himself a lot of financial headaches with the new Burroughs school accounting plan which incorporates the unparalleled speed and flexibility of Burroughs numerical or typing Sensimatic. And, as ever more students pour into our schools year after year, the need for complete, accurate, instantly available financial data becomes increasingly obvious.

The new Burroughs plan brings complete mechanization of descriptive accounting to school systems. Look at these benefits: Greater productivity with less effort. Improved

accuracy. Smoother work flow. Split-second availability of all the figure-facts you want when you want them.

Even a newly trained operator can race through revenue accounting, budgetary accounting, check writing, payroll, student activity accounting. She can switch from job to job at the flick of a knob.

There's a free booklet about this work- and time-saving plan. You can get your copy by calling our nearby branch office. Or write to Burroughs Division, Burroughs Corporation, Detroit 32, Michigan.

Burroughs and Sensimatic are trademarks.



Burroughs Corporation

"NEW DIMENSIONS / in electronics and data processing systems"

(Circle number 718 for more information)

conventions, serve on a committee or two and perhaps act as supervisor for a student teacher.

Those in Category C would be required to have at least three years of experience, to work toward a higher degree and to "give themselves wholly to the profession."

Categories D and E would be only for those who chose to work the year round, either as teachers in summer school or in preparing new programs.

To rate an E classification the teacher would have to have "considerable educational experience" and apply in person to the school board explaining the work he wished to do.

Committee members point out that the categories "in no way classify effectiveness in the classroom."

In a 30-page report submitted to the Boulder school board, the committee concedes that among teachers "there undoubtedly are real differences in effectiveness." But it takes the position that the differences cannot be measured and therefore must not be made the basis for salary distinctions.

The salary index, designed to simplify budget-making and equitable pay adjustments, assigns each teacher an index rating based on her teaching category as well as on her training and experience, and service outside the school system.

Starting with a base of one representing the present minimum salary, extra points would be given for each of the factors considered in determining teacher pay.

The salary would be determined by multiplying the base, or minimum salary, by the teacher's index rating.

Committee members say the cost of their proposal could not be estimated until the number of teachers in each category could be determined. But it undoubtedly would be more expensive than the present inflexible schedule.

Mrs. Florence Grieder, school board president, said the board had neither accepted nor rejected the plan. It has a lot of good points, she said, but would not be easy to put into effect.

► Students converse with Australia by tape

Students in Oklahoma City's Central High School have set up a tape-recorded exchange program with a group of their counterparts in Australia.

The Oklahoma students talk onto a tape their views on government, sports, education, clubs, entertainment, etc., and send the recording to Australia. There more than 200,000 persons hear the tapes.

Australian students have responded

by preparing tapes of their own on which they ask questions about the United States and answer questions the Oklahoma students have posed concerning Australia.

The program has excited the imagination of students on both ends of the exchange, and plans are underway to broaden the program to include students in other countries.

► Night high school for those who work

The Sewanhaka, N. Y., high school district is giving special evening classes for credit aimed at students 16-years and older who left school to work.

Courses offered will be equivalent to those provided in day high schools. Students will be able to earn a maximum of two course credits per year towards a diploma.

Need construction money? You might follow the lead of Kanawha County, W. Va. There two elementary schools were overcrowded. No funds were available to build new rooms. At one the PTA raised \$3,000, financed three classrooms. At the other the same organization raised \$4,000, for materials, literally built own three-room cinder block addition.

Enjoy extra care
at no extra fare...

FLY UNITED AIR LINES

to your teacher conventions!

You'll find everything about United's service is extra—*except the fare!*

Schedules, for example, are timed to suit your convenience; nonstop to most convention cities coast-to-coast and to Hawaii. And you can take your choice of deluxe First Class or economical Air Coach Mainliners. The low fares will surprise you.

It's nice to know, too, that every United Mainliner® is radar-equipped to give you a smoother, more comfortable flight.

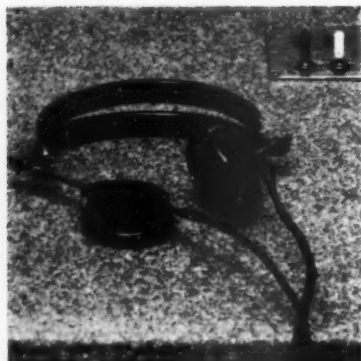
Plan now to enjoy this extra measure of care and comfort on the way to your convention. For full information and free folders, see your travel agent. Or write Teacher Conventions Dept., at your nearest United Air Lines Regional office.

New York—80 E. 42nd St.
Chicago—Monroe & Wabash St.
Seattle—1225 Fourth Ave.
San Francisco—400 Post St.
Los Angeles—Sixth & Olive Sts.



(Circle number 714 for more information)

1 The listening laboratory



In the listening lab, the teacher makes a record. The entire class listens and practices in chorus. While they listen, the teacher can circulate and help individual pupils.

2 The listening-speaking laboratory



In the listening-speaking lab, the teacher makes a record and the pupils can listen to it through earphones. They can also make records. Each pupil can listen to his own recording. The teacher can listen in on any pupil while he is recording.

3 The ultimate laboratory



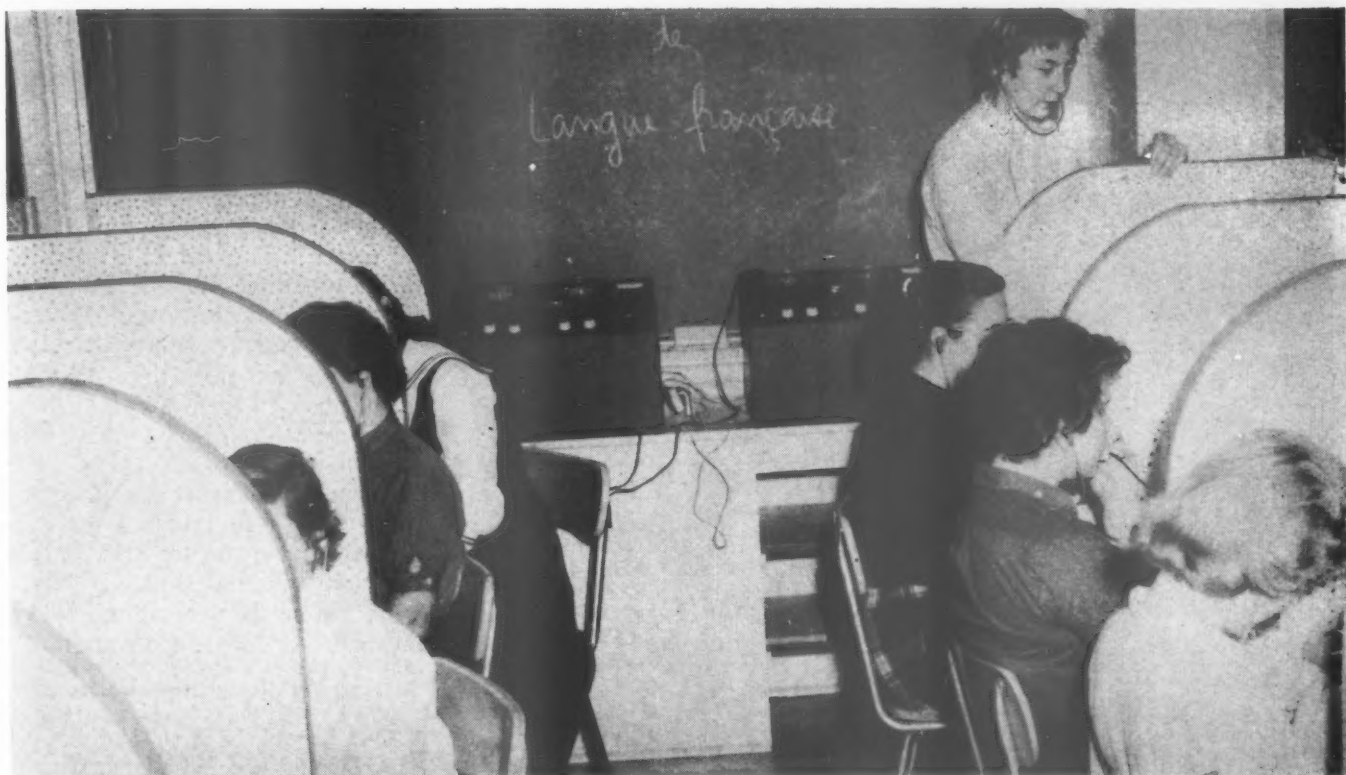
In the most complete lab, the teacher can make a record and pupils can listen through earphones. They can record and hear their own recordings. They can record even while they listen to the teacher's recording. The teacher can listen-in. The teacher and a pupil can talk to each other through mikes.

pupil repeats the phrases with the recording. The teacher, at this time, listens to each pupil closely and corrects or praises each effort quietly while the rest of the class continues to practice. Sometimes, the recorded voice may be that of another teacher, or a native speaker. It is often possible to get foreign visitors to record a story, a poem, or even a list of words—though the same visitor might feel very shy at the thought of talking face-to-face with a room full of young people.

By means of these records, even the teacher who "can't sing a note" is able to teach the pupils songs in the language they are studying. Children enjoy singing. They like the traditional folk songs. Closer to their hearts, however, are our latest hits which, very often, are recorded in several countries with native lyrics and native singers. This type of teaching is more than a pleasant pastime. Linguists say that singing is the easiest and surest way to learn to accent the right word in a sentence, or to elide syllables like a native. For some reason, singing seems to loosen the muscles that produce words, and the student forgets his fear of error while he is interested in making music. If there is a good musician in the class, he may be willing to record the accompaniment to some songs. First very slowly, then in faster and faster tempos.

There are other uses for this recording equipment—testing for comprehension, for example. The pupils are given a sheet of paper on which they find questions in English and the space to write answers. These questions might be about a short story or a descriptive passage. The teacher starts the recording of the story, or the description, in the language the class is studying, going along at the speed they are able to understand. When the story is finished, the voice begins to repeat, but in small doses. Each "dose" contains the answer to one of the questions on the paper. The pupils listen carefully and then, during a silent space on the record, teacher can easily control the length write their answers in English. The of answering-time allowed, and can also repeat any part as often as necessary. In correcting these tests, the English answers that tell most exactly what was said in the other language, rate highest.

Or consider the case of the "slow-



er learner" . . . or the student who has been absent. The record is there for continued drill or makeup. And a teacher is freed from repetitive routine to give other individual help that is needed.

In some schools, still using the minimum of one tape recorder, teachers have used the equipment to present foreign language programs picked up from radio or TV. The importance of this method is that it helps the pupils to realize that others are actually using this language every day, in "real life." Still others make a very good record of a story to go with slides or a film-strip, confining the vocabulary used to phrases their pupils can understand.

The simplest laboratory

This listening laboratory is sometimes called the "audio-passive" type. It is *audio* in that the pupil hears. It is *passive* only in the sense that he does not also usually record his own voice. Many schools use it as a starting point and, as the budget grows, and the teachers gain experience, look forward to a classroom in which each pupil may hear the lesson he needs, rather than the one needed by most of the class. Obviously, if the laboratory has several play-back machines with earphones, each pupil can listen to a

different record (in fact, two or three different languages may be taught in the same room). But this means there must be a set of recordings for each machine or else no two pupils can work on the same lesson. Various solutions have been worked out for this problem. One is to make duplicate recordings, a simple operation if two machines are available, since the original record can be used to make the copies. This takes time: with a bank of recorders more copies can be made at one time.

There is a third answer, now used in an increasing number of schools. Here the record is played on *one* machine, but is heard over several sets of earphones. If the teacher has a control board or console, two or more records can be played on different "channels" and directed to groups of earphones. For example, if there are 15 listening posts, then the teacher can send one record to a group of five, another record to another five, and so on. In this kind of a set-up, the pupil cannot tune-in on another channel.

But consider the potential in this fairly inexpensive arrangement. By means of master controls, the teacher can reach any chosen group at one time. All may hear the new lesson, for example, then some may hear it again, while the second group listens to a review and a third group

listens to some advancement or enrichment material. Moreover, while most of the pupils are listening, the teacher can sit in the next room with a small group giving face-to-face instruction or listening to recitations. This latter point is critical.

In theory, each pupil learns from hearing others recite. This may work very well in a current-events class when each pupil has something new to contribute. But in a foreign language class, especially among beginners, this theory seldom works well. The recitation is dull and repetitive. The students can actually pick up errors from their fellows. Interest lags, and each becomes concerned only with his own opportunity to recite. He is an active member of the class only for the few minutes that he is the center of attention.

It should be pointed out that, in using machines, the teacher is not pushed into the background. Indeed, she is often busier than ever. In fact, because of the machines, the teacher invariably has more opportunity to give each pupil personal attention because routine work and uninspired drill has been eliminated.

This audio-passive laboratory works well when classes are small. In other cases, particularly after a start has been made with a laboratory, the decision has been to ex-



pand so that pupils can record their own voices and hear themselves as others hear them. This brings us to a second general group of language laboratories.

The two-way laboratory, as its name implies, permits the student to both listen and speak, then listen again to his own voice. There are substantial reasons for adding this extra step. According to scientific tests, a person hears the sound of his voice differently from the sounds made by anyone else. This is because, in addition to hearing through the outer ear, the sounds he makes also send waves through the tubes connecting throat and ear, so that he hears some sounds from *within*—sounds that no one else hears. This is important in the learning of a new language, because the pupil does not always know just how he is saying a word. He is *sure* he sounds just like the teacher, and it is often impossible to convince him otherwise or to explain just where he is wrong. Because of this it is very helpful to have each pupil hear himself as others hear him. Once he notices what his errors are he is half-way to correcting them.

This principle is recognized by all language teachers and has led many

schools to adopt some form of recording program for language pupils. This can be done, very simply, with one tape recorder, but time presents a problem. For example, at the rate of five minutes for each pupil, it can handle at best 11 or 12 students in a class period. If this activity goes on in a regular classroom, there must be a silent activity for everyone but the recording pupil.

In spite of this limitation, teachers have been able to set up a listening-speaking situation with only one machine. In one school, for instance, the teacher makes appointments for the pupils during the recess time and after school. Given a willing teacher, it is not too difficult to get the students to cooperate on "extra hours." It's fun to use the equipment.

It is more convenient, of course, if the recording activity can be part of the regular class work, and can be repeated often. To accomplish this, some schools have established a laboratory which can be supervised *from the classroom*, without being a part of it. They use sound-proofed booths for anywhere from three to 30 pupils. These booths are not like the "isolation booths" of TV fame, nor do they look like tele-

phone booths. Rather, they are basically three sided partitions of inexpensive soundproof material (*see pictures*). In some cases, the partitions have been installed as simple upright dividers along a counter, but the general opinion is that it is better to have the dividers project far enough so that pupils are not tempted to reach into the next booth to disturb their neighbors. In fact, in the most advanced sort of laboratory, the student is allowed so little possibility for distraction that he might as well study, even though he may be an indifferent pupil. There is nothing else to do!

Some makers of laboratory equipment have even recessed the machines into the counter tops, so that the more mechanical-than-linguistic pupil will not be tempted to explore the inner workings of the machines.

Setting up listening booths

One school, at first, had booths which would accommodate two students together, on the theory that one would encourage the other. It is interesting to note that this year's budget in this school allows for reconstruction so that there will be one student in each booth.

In some schools, the regular school custodians build these partitions, working closely with the language teachers on the questions of space, types of materials, and movability. Booths can also be bought from companies that specialize in language laboratory equipment. These "store-bought" fixtures may be movable three sided metal partitions, or fixed. They may have glass fronts so pupils can see movies of slides to accompany the lessons, or they may have hinged fronts for that purpose. In general, the type of booth is determined usually by whether the classroom and laboratory are in one room, or whether the laboratory is a smaller area connected to the classroom and visible through a window for control.

A typical two-way laboratory

Let's take a typical situation. The school has a laboratory-classroom of 30 booths. Each booth has ear-board so that each pupil can hear one of three or four different records the teacher selects. In addition, each booth has a recording machine with a microphone so that each pupil can record his own voice.

In this kind of a set-up, the pupil can hear the correct pronunciation, then read a passage so that he can judge whether his words sound like the pattern. The teacher "floats" around the room and may have individual conversations, helping him to hear his errors and explaining how to correct each one in turn.

In this kind of a situation, the recordings of the pupils can also be used in testing. Although it takes time for the teacher to hear each record, there are many teachers who consider this time well spent. Teachers experienced with these laboratories say they are able to develop a system for marking recorded recitations so the job is not too formidable.

Experienced teachers also point out that the two-way lab provides a good means for overcoming the shyness that many pupils feel in trying to speak a foreign language. The children have a chance to practice in private, before they confront the whole group.

Teacher reaction

Invariably, when the pupil has a chance to record, the teacher has more work. In every case we contacted, however, teachers were anxious to say that the extra amount of time they spent was more than repaid by the results they achieved. Most of them seem to feel that they may not teach *more* pupils each year by means of these laboratory techniques, but certainly they teach pupils much *better* than otherwise, and most of them emphasize that they cover more material. They also stated that the laboratory was an ideal means of getting each pupil to learn at his own pace and to learn clearly whatever material he was capable of understanding.

SCHOOL MANAGEMENT'S research of language laboratories seems to indicate that at most public elementary and secondary schools, the labs seem to be confined to either the listening or the listening-speaking type. Some, however, are moving along to an even more complete set-up—one that is used in a number of colleges and universities. These more elaborate set-ups have one principal target in mind—to allow the teacher and pupil to work even more closely *together* in the study of language. It is particularly interesting to note that in any school that has started to use mechanical equip-

ment to aid the language teacher, the movement is always for *more* units, and for *more flexible* systems. They move from one recorder to many, from a few listening booths to more, then to booths that have recording and listening facilities, and eventually to a system in which the equipment is so complete that the possibilities for language experience are almost endless. *No example has been found of a school moving in the other direction*—of trying a language laboratory, then abandoning it for any reason at all.

Although the "complete" laboratory is, at present, found mostly in colleges and universities, it may be of interest to see how one is operated. This type of lab is called "evaluatively audio-active." This simply means that the pupil has a very active part in the recording program and that the equipment is rather complex. Each booth is connected to a master console that gives the teacher control over the record through which each pupil will listen. In addition, the teacher can listen in to any booth, and, thus, monitor the individual pupil's work. To accomplish this, there are two-way lines to each booth so that the teacher and pupil can converse without disturbing others.

In these advanced laboratories, each booth has a record player which permits the individual pupil to play a record and control how often it will be repeated when he strikes a difficult section. In addition, each booth has a recorder so that the pupil can practice his pronunciation over and over again. By means of a dual-track tape, the pupil can hear a phrase spoken by an expert, then immediately record his own version, or an "answer." When he has finished, he can play it back and hear the comparison between the two pronunciations. When the lesson is finished, the pupil's voice can be erased from the dual-track tape, but that of the original expert remains.

Yale and Columbia have laboratories of this type for 100 or more

students. The University of Massachusetts, working with a Carnegie grant, is erecting a building to house three laboratories to accommodate a total of at least 85 students, with a radio and TV room connected to one of the labs. Some colleges have a library of recordings and recorders, so that each student can have a recorder in his room and can sign out whatever lessons he needs for the week or the month.

On the high school level, dozens of schools have started laboratory operation. They include: New Castle, Pa. (junior high); Dover, Dela. (a 24-position lab); Roslyn, N. Y. (six positions); Beverly Hills, Calif. (30 positions); Wequawick, N. J. (12 positions).

The language learning experience in these situations is nothing short of sensational.

Let's assume that your high school hasn't even got a tape recorder. With a budget of no more than \$200, you can buy an adequate tape or magnetic disc recorder and some re-usable supplies. Since even a very modest beginning is a step in the right direction, this may be the logical starting point for your school.

If you could budget for several console-controlled booths, with both recording and playback equipment, a good-rule-of-thumb is approximately \$400 per pupil station. This includes all of the master equipment. If the booths are constructed by the custodial staff, there is a saving, dependent on the type of material used to construct the booths, and whether they are fixed to a stationery counter or movable for use with regular classroom desks.

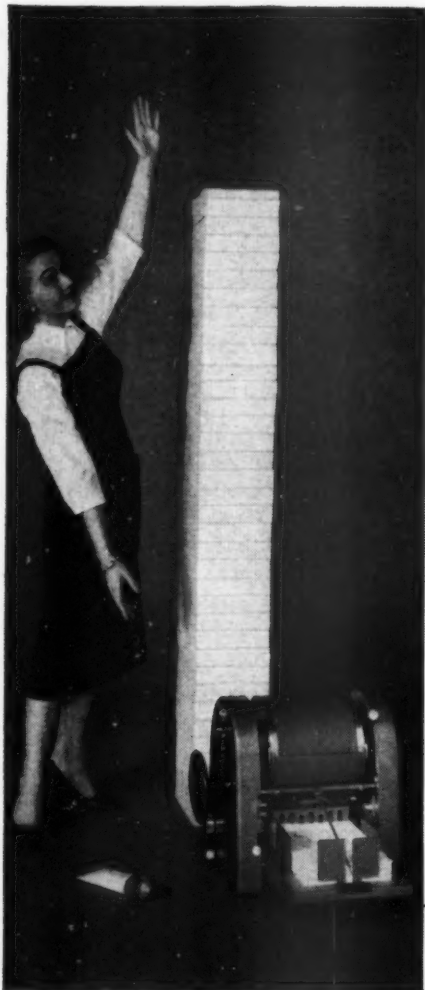
Wiring is a factor in figuring costs. In a new building, it pays to have wiring built in, but this is not necessary. Wires can be installed in relatively inexpensive pre-fabricated channels without worrying about the cost of concealed installation.

Some idea of costs can be drawn from the experience of Fairfield University, in Fairfield, Conn. This fall the University is putting into operation a laboratory of 24 acoustical tiled booths, each with a glass front panel, a microphone, a tape recorder and earphones, as well as volume and channel controls. There is also a master console control and phonographs to allow five channels to operate at once. Obviously, this is a

Expert advice on language laboratories is available from:

Magnetic Recording Laboratories
126 Fifth Ave.
New York 11, N. Y.
Electronic Teaching Laboratories
1818 M St.
Washington, D. C.

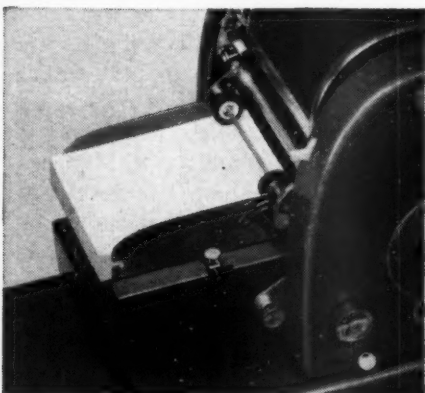
Today's biggest money's worth in school mimeographs!



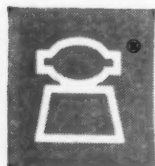
UP TO 20,000 COPIES FROM ONE INKING—without pumping or priming—without manipulating any dials or levers, even when changing stencils. Gone is the need for hand brushing. Now, add the fact that these new A. B. DICK mimeographs are lower, much lower in price.



CHOICE OF EITHER PASTE INK OR FLUID INK—Paste cylinder for unmatched cleanliness and convenience. Fluid cylinder for the new ultra-fast drying inks that eliminate show-through and set-off. In both heavy-duty power-driven and hand-operated models.



WON'T FEED DOUBLES—Completely new feeding system guarantees virtually perfect feeding of unevenly cut paper, ream ends, post cards and lightweight paper. All operating instructions are permanently mounted on the machines with all controls clearly identified.



A·B·DICK®
DUPLICATING PRODUCTS

P.S. All A. B. Dick mimeograph products are for use with all makes of suitable stencil duplicating products.



FOR MORE INFORMATION—simply mail the coupon. Or better still, call your nearby distributor of A. B. Dick products. He's listed under Duplicating Machines in the classified section of your phone book.

A. B. DICK Company, Dept. SM-28
5700 West Touhy Avenue, Chicago 31, Illinois

Name.....
Position.....
School.....
Address.....
City.....Zone.....State.....

rather elaborate installation. University officials estimate the cost at \$10,000.

You will find manufacturers and distributors of laboratory equipment to be cooperative in the matter of making estimates and suggestions. The ones we have contacted have urged that school managers discuss their problems with them. They claim that, because of their experience, they are able to help evaluate what type of equipment may best suit the school in question. They also point out that they can help a school install a simple, inexpensive system with built-in provisions for expansion that will later mean a large saving of money.

Prudent schoolmen are naturally wary of new ideas that may prove to be temporary. This concern does not seem to obtain here. All evidence points to the language laboratory as a growing school need.

Other alert administrators and school boards ask, "will the teachers accept it and keep on being enthusiastic?" It's a good question.

For the most part even older teachers of long standing, and generally all younger ones, feel that they can teach more effectively by means of these electronic devices. They are prepared to gear their teaching methods to this approach and wait anxiously for funds to be appropriated for this purpose. Most language teachers *know about language laboratories*—but few have the temerity to press for the funds.

So far as the benefits of this new method of teaching are concerned, they are hard to measure. Few teachers are willing to say, "a pupil who would get a C average under the old system will get an A under the new." There is a reason: the material that pupils gain under the new system often was never even touched under the old. In one school, for example, the teachers found that this year, with the laboratory, the students maintained the same level of marks in their written examinations as in other years. But, they are quick to point out, the same students had also gained the ability to use and understand the *spoken* language to the point where this also could be tested—something not previously a part of the program. Another secondary school reports that a pupil who entered a beginning class six

(Circle number 739 for more information)

weeks late, with no extra help from the teachers was able to catch up to the class and earn a 98% standard for a final mark. The recordings made this possible.

In all cases, teachers report that their students learn faster. In one college situation, it was found that mature students are able to learn enough of Russian or a Far-Eastern language in eight months to be able to carry on business or diplomatic affairs easily. This is the highest achievement than can usually be expected from a four-year college course using pre-electronic methods. Some high school teachers report that pupils are able to learn in six weeks the material that previously took a semester to master.

What this speed-up will mean at the secondary school level in the future is difficult to assess as yet. The potential is tremendous when one considers our already overcrowded curriculum. Present limitations are the fairly rigid rules for what covers a year's work and textbooks to accommodate the new techniques. What *can* be assessed, however, is that students using electronic methods are learning language as a *means of communication*.

There are as many different language laboratories possible as there are schools. The three major types are 1) listening, 2) listening-speaking, and 3) two-way communications with independent controls.

No school is limited to a "package deal" of any one of these types. Each laboratory is separately designed to fit the needs of the school, the teachers, the pupils and the budget. They may have some features of any one or all three major types. The equipment may involve tape recorders or disc recorders, or both. The discs or the tapes, or both, may have permanent recordings or may be erasable. So far as the human element is concerned, the teachers and the pupils work as hard or harder than previously, but are encouraged to do so because results are good and rapid. The program may provide enrichment, or be used to speed up the regular basic courses. Eventually, both these ends are usually gained.

So far as cost is concerned, since the laboratory can grow over a number of years, the cost need not be prohibitive in any one year. **End**

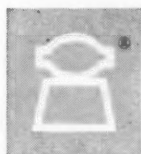


Quick copies of anything on paper

with the new A. B. Dick photocopy duplicator

"On-the-spot" copies of anything printed, duplicated, typed, written, drawn or photographed . . . on opaque, two-sided or transparent paper, white or colored . . . heavy cardboard, pages bound in books or magazines. You can make them in seconds, for pennies, with the new A. B. Dick photocopy duplicator.

Every photocopy is an exact duplicate of the original—black on white for easy reading. Completely permanent, too, with all the handling and filing advantages of regular 24-pound paper. For further information—or a demonstration—call your distributor of A. B. Dick products. He's listed under Duplicating Machines in the classified section of your phone book. Or simply mail the coupon.



A · B · DICK®
DUPLICATING PRODUCTS



A. B. DICK Company
5700 West Touhy Avenue, Chicago 31, Illinois

Dept. SM-118

Please send me more information about the new photocopy duplicator that makes "quick copies of *anything* on paper."

Name

Position

Company

Address

City Zone State

(Circle number 720 for more information)

PRESS RELEASES

News from the business firms serving your schools

Mobile science lab

A new mobile laboratory that can be rolled easily from room to room



for teacher demonstrations in elementary science has been developed by the Central Scientific Co. of Chicago. The unit is equipped with gas, electric and water services, support rods, a peg-board display panel and a roomy storage area. It is available in attractive colors and has a large formica work surface. By permitting regular classrooms to be converted into temporary science labs, the new mobile unit will help schools to meet the increased teaching load in the physical sciences.

For more information on this product, circle number 901 on the Reader Service Card.

■ ■ ■

Lathe switch insures safety

A new slow-start safety switch, designed to provide the ultimate in safety for student operators using the Delta 12-inch variable-speed wood lathe, has been introduced by Rockwell Manufacturing Co.

Designed specifically for the school shop, the slow-start switch makes it impossible for a student to start the lathe at high speeds. It can be stopped at any speed merely by touching the protruding stop button.

In operation the lathe's start button is covered and locked in the "on" posi-

tion by the class instructor. The student must then start or stop the lathe by turning the variable speed hand wheel to the lowest rpm. The rpm speed is indicated by an inclined speed indicator on the lathe body. If an emergency stop is made, the student cannot start the lathe again without calling the instructor to unlock the switch cover on the start button.

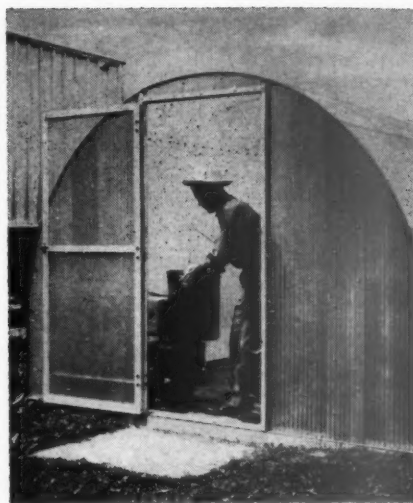
For advanced students, the cover can be left unlocked for normal start-stop operation at any speed. The cover can also be locked to prevent lathe operation by unauthorized personnel. Price for the kit is \$19.95.

For more information on this product, circle number 898 on the Reader Service Card.

■ ■ ■

Fiber glass plastic building

The Kemhut, an 840 cubic foot storage building, made of fiber glass reinforced translucent plastic panels, has



been developed by the Kemlite Corp., Joliet, Ill.

Designed for use as a low-cost auxiliary building, the Kemhut serves for storage of school supplies and equipment. It can be used where storage space is limited, or for separate storage of athletic equipment, lawn maintenance equipment, paints, aromatic supplies, and other items, and can also serve as a concession shelter at school activities.

Easily assembled in a few hours, the building many be staked to the ground like a tent or secured to a perimeter of wood two by fours. If more permanent installation is desired, it may

Literature Available FROM MANUFACTURERS

Band instruments. A colorfully illustrated catalog, published by the Conn Corp., features a selection of specially designed instruments and tuners for all students.

For a free copy of this catalog, circle number 889 on the Reader Service Card.

Curtain walls. A complete information folder on new Thinlite curtain walls, published by the Owens-Illinois Glass Co. includes construction and installation details.

For a free copy of this folder, circle number 888 on the Reader Service Card.

Floor care. A 32-page booklet on developments in floor care, published by the Masury-Young Co., contains tips on how effective care can cut floor maintenance costs.

For a free copy of this booklet, circle number 886 on the Reader Service Card.

Hard floor maintenance. A new book-

let, published by Huntington Laboratories, contains effective maintenance procedures for hard floor materials, and tells how to avoid problems as well.

For a free copy of this booklet, circle number 883 on the Reader Service Card

Instructional materials. An illustrated catalog for quick and easy reference to more than 700 filmstrips coordinated with 15 curriculum areas has been published by The Jim Handy Organization.

For a free copy of this catalog, circle number 885 on the Reader Service Card.

School construction. A new catalog, published by Rilco Laminated Products, Inc., shows the application of glued laminated wood arches, beams and trusses to the construction of modern economical schools.

For a free copy of this catalog, circle number 884 on the Reader Service Card.

be bolted to a foundation. It can be quickly disassembled for shipment or storage.

The structure does not require internal bracing. It is entirely self-supporting, thus making the inside free from any bothersome overhead obstruction or projection.

For further information on this product, circle number 896 on the Reader Service Card

■ ■ ■

Phonograph for school use

The 1959 Califone Director is a new, popular priced, transcription-playing phonograph featuring a straight AC amplifier which has both increased frequency range and distortion reduced to a negligible minimum.

Features include an automatic arm rest which secures the arm automatically to protect the cartridge and needles in spite of careless use. The unit floats



on cushioned springs to prevent groove jumping due to floor vibration. It incorporates increased microphone gain for use with lower level high fidelity microphones, and through its 12-inch extended range heavy duty loudspeakers, it can cover an audience of 1,500 students for either voice or music.

For further information on this product, circle number 892 on the Reader Service Card.

■ ■ ■

Signs for school safety

A new line of portable warning flashers has been introduced by the Patrol-Lite Division, American Manufacturing Corp., Warsaw, Ind.

Patrol-Lite is a rugged tubular steel portable hand truck with two seven-inch amber lights which flash alternately. The lights are operated by a regular six volt battery which is in a tamper-proof locked box. A recharging unit is included with each fixture.

A new feature is a large 24-inch square sign panel which can be worded to fit the requirements of local ordinances or school safety programs.

This warning sign can be seen for blocks and can't be ignored by motorists. School children can operate the unit. For example, a safety patrol member can simply wheel it into the center of dangerous streets or intersec-



tions just before school rush hours, and easily return it afterwards. A key turns the lights on, so unit is protected when not in use.

For more information on this product, circle number 890 on the Reader Service Card.

■ ■ ■

Stack chairs for schools

A new, non-folding stack chair of contemporary design has been introduced by Durham Mfg. Corp., Muncie, Ind. The chair is all steel with vinyl-clad seat and back, mar-proof and



burn-proof. It is standard dining height and has a contoured backrest and extra large seat.

The chairs fit standard folding chair trucks and store in small space. They may be stacked as high as a person can conveniently reach, at least 12 chairs high.

For more information on this product, circle number 900 on the Reader Service Card.

■ ■ ■

Motorized rolling gymstands

Wayne Iron Works has announced the availability of a new type of gymnasium seating in which the seat, riser and footboards are continuous lengths of wood. This rolling gymstand is a motorized bank for the entire length of a gymnasium. It eliminates the need

for three, four, five, 10 or more individual rolling gymstand sections normally used to equip a complete side or end of a gym.

The continuous-motorized rolling gymstand is opened and closed by a fully-automatic motorized system, regardless of how long the unit is. This automatic opening and closing system is key controlled so that unauthorized persons cannot operate the unit.

For further information on this product, circle number 894 on the Reader Service Card.

■ ■ ■

Steel folding-chair

A new all-steel folding chair, now being marketed by Clarin Mfg. Co. carries a 10-year guarantee. The chair has double-tube and channel construction for durability and rigidity. The angle between seat and back of the new all-steel chair is scientifically determined, providing additional comfort while aiding posture and mental alertness. The new chair is constructed of 19-gauge carbon steel and is electrically welded. Moving parts are joined with solid steel, die-formed rivets and washers at all pivotal points.

For further information on this product, circle number 895 on the Reader Service Card.

■ ■ ■

Book case shelving

A new line of book case shelving for use in libraries and schools has been announced by the Penco Div. of Alan Wood Steel Co.

Available in four styles and 10 sizes—the shelving offers several unusual design and construction features. Foremost among these is that for quick, easy positioning, the shelves are adjustable on one-inch centers. Shelf design eliminates the need for shelf brackets and lets the shelf rest firmly on slots at four points of the double channeled upright panels.

The width per section is 36 inches. These sections can be used as individual units or joined together in continuous assemblies.

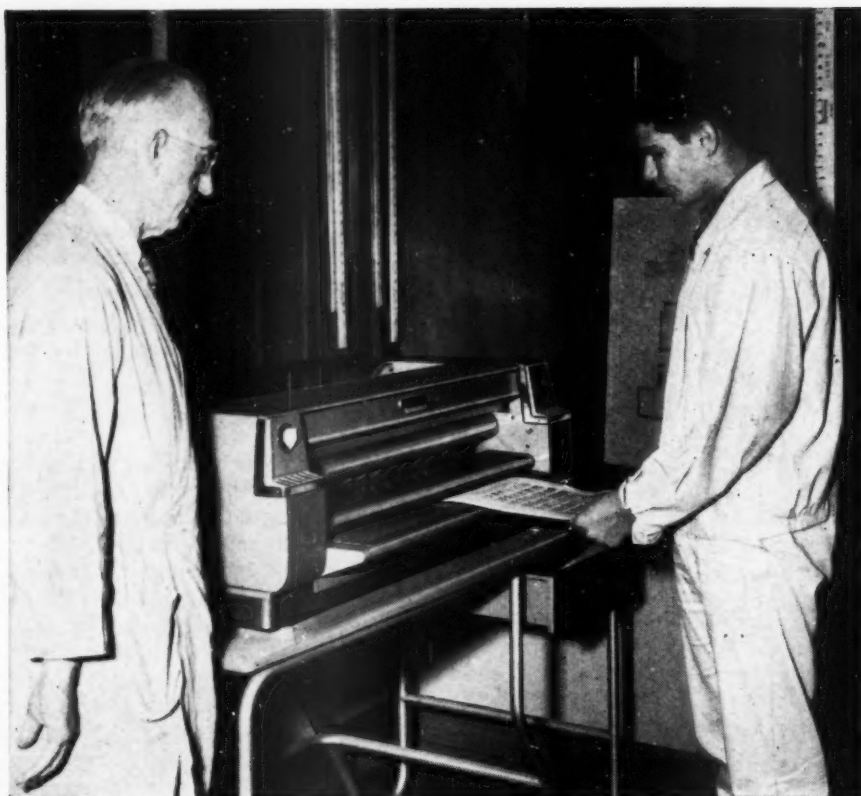
For further information on this product, circle number 893 on the Reader Service Card.

■ ■ ■

Vacuum for wet and dry pickup

A new economy-priced vacuum cleaner produced by General Floorcraft, can be used for both wet and dry pickup, with no changes necessary, and as a vacuum and powerful blower. The unit has a 62-inch water lift, a tank capacity free of 15 gallons, a ¾ h.p. motor, quick-fasten snap-on tools and other accessories, including a compact tool basket.

For more information on this product, circle number 902 on the Reader Service Card.



"Worth its Weight in Textbooks!"

Mr. William Cole, mechanical drawing instructor at Abraham Lincoln High School in San Francisco, is a firm believer in textbooks. But he also recognizes the invaluable practical training his students are getting through use of their Bruning Copyflex Model 300 reproduction machine.

Right in the class room, students make sharp, black-on-white diazotype prints in seconds of their drawings or tracings — up to 30-inches wide by any length. They learn for themselves how their drafting board work effects the sharpness and clarity of prints. They gain valuable experience with all of the drafting and reproduction techniques involved with such materials as intermediates and film overlays. In short, Mr. Cole's students are getting *today* the whiteprinting experience and benefits they'll utilize *tomorrow* in industry!

You owe it to yourself and your students to investigate the remarkable Copyflex "300". It offers all the versatility and big printing width of a large, expensive diazotype reproduction machine — at a price to fit school budgets. Moreover, the "300" can be utilized for fast, labor-saving reproduction of student transcripts and a wide variety of records, reports, charts, and memoranda. Why not mail the coupon right now for more information?



See the Bruning Exhibit in
SCHOOLROOM PROGRESS U.S.A.

BRUNING
Copyflex

— Send for Your Free Copy! —

Charles Bruning Company, Inc., Dept. 113-SM
1800 Central Rd., Mt. Prospect, Ill.
In Canada: 105 Church Street, Toronto 1, Ont.

☐ Please send me my free booklet on Copyflex Model 300.

☐ Please have your local representative call on me.

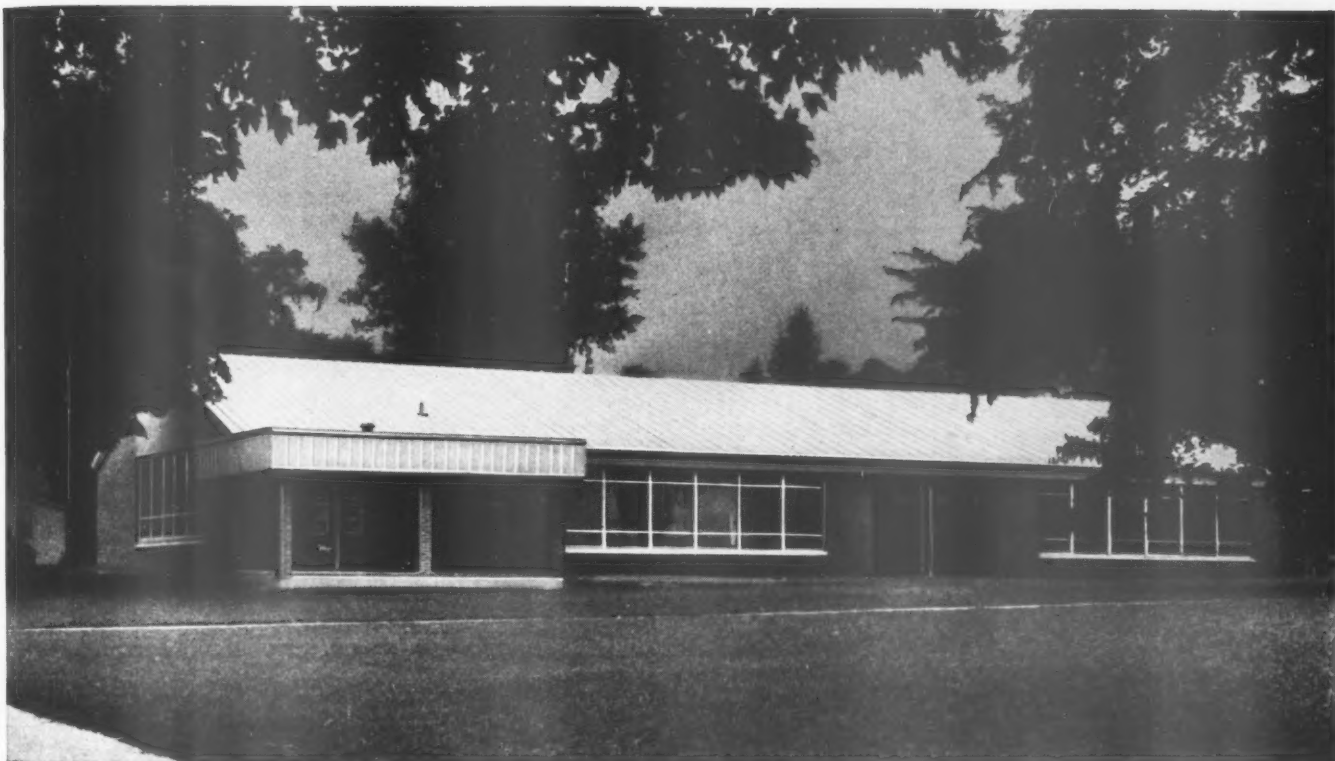
Name _____ Title _____
Company _____
Address _____
City _____ County _____ State _____



(Circle number 716 for more information)

Advertisers

KEY	PAGE
738 Aetna Life Affiliates Co. (William B. Remington, Inc.)	Cover II
736 Allied Radio Corp. (George Brodsky Adv., Inc.)	41
707 American Playground Device Co. ... (W. T. McVeigh, Co.)	60
717 Anemostat Corp. of America (Michel-Cather, Inc.)	44-45
710 Bausch & Lomb Optical Co. (Wolff Assoc., Inc.)	10
708 Charles Beseler Co. (Dale and Finkels, Inc.)	60
711 G. S. Blakeslee & Co. (The Biddle Co.)	11
701 Bradley Washfountain Co. (Kirkgasser-Drew Adv.)	56
704 Breuer Electric Mfg. Co. (Grimm & Craigle)	58
716 Charles Bruning Co., Inc. (H. W. Kastor Adv. Co., Inc.)	72
718 Burroughs Corp. (Campbell-Ewald, Co.)	62
719 Butler Mfg. Co. (Aubrey, Finley, Marley & Hodgson, Inc.)	Cover III
720 A. B. Dick Co. (Fuller & Smith & Ross, Inc.)	68-69
739 E. I. DuPont de Nemours & Co. (Batten, Barton, Durstine & Osborn, Inc.)	
721 Grasselli	14
737 PX Fabrics	61
705 Gaylord Bros., Inc. (Barlow Adv., Agency)	22
712 General Floorcraft, Inc. (Posner-Zabin-Laewy-Stemper, Inc.)	40
722 Haldeman-Homme Mfg. Co. (Harold C. Walker Adv.)	7
700 Hampden-Specialty Prod., Inc. (Gibney and Barrera Adv.)	42
723 Hillyard Chemical Co. (Phillips-Reick, Fardon)	2
724 Holcomb & Hoke Mfg. Co., Inc. ... (Keeling & Co., Inc.)	6
725 C. Howard Hunt Pen Co. (Doremus Eshleman Co.)	41
706 Howe Folding Furniture (Lawrence Peskin, Inc.)	23
709 Huntington Laboratories, inc. (Bonsib, Inc.)	60
713 Hussey Mfg. Co. (Ray Mills Adv. Agency)	41
— International Business Machines Corp. (Benton & Bowles, Inc.)	48-49
703 The Kalart Co. (Charles W. Hoyt Co., Inc.)	57
726 Kawneer Co. (Fuller & Smith & Ross, Inc.)	12-13
727 Libbey-Owens-Ford Glass Co. .. (Fuller & Smith & Ross, Inc.)	17-20
728 Maico Electronics, Inc. (Bozell & Jacobs, Inc.)	53
729 Minneapolis-Honeywell Regulator Co. (Foote, Cone & Belding)	4-5
730 The Monroe Co. (Lessing Adv. Co., Inc.)	57
731 Republic Steel (Meldrum & Fewsmith, Inc.)	8-9
732 Singer Sewing Machine (Young & Rubicam, Inc.)	50
733 Underwood Corp. (William Esty Co., Inc.)	1
714 United Air Lines (N. W. Ayer & Son, Inc.)	63
734 United States Plywood Corp... (Kenyon & Eckhardt)	Cover IV
735 United States Steel Corp. (Batten, Barton, Durstine & Osborn, Inc.)	54-55



An elementary school located in Holton, Michigan



Cartwright Elementary School No. 3 Phoenix, Arizona

One system of building created both of these schools on modest budgets

In spite of the vast difference in outward appearance, the schools above have one thing in common. They both provide much-needed classroom space at a cost-per-pupil that other quality building methods cannot match.

How is this possible? The answer is simple. Both schools were created with the Butler Building System—the lowest-cost way to build well.

Mass-produced Butler components were used to form the basic structures. This saved much routine engineering time and costly custom-fabrication.

The simple, functional lines of these basic Butler structures make it possible to create an architectural

treatment as modern or as conservative as you wish. Buildings can be completed with brick, block or any other material your budget or your desire dictates.

And, thanks to Butler's clear-span, rigid frame design, interiors are free of columns or overhead trusses. This permits maximum flexibility in planning classroom arrangements.

The Butler Building System has helped communities all over the country build better schools on modest budgets. For full details on the modern way to build, contact your Butler Builder. He's listed in the Yellow Pages of your phone book under "Buildings" or "Steel Buildings." Or write to us directly.

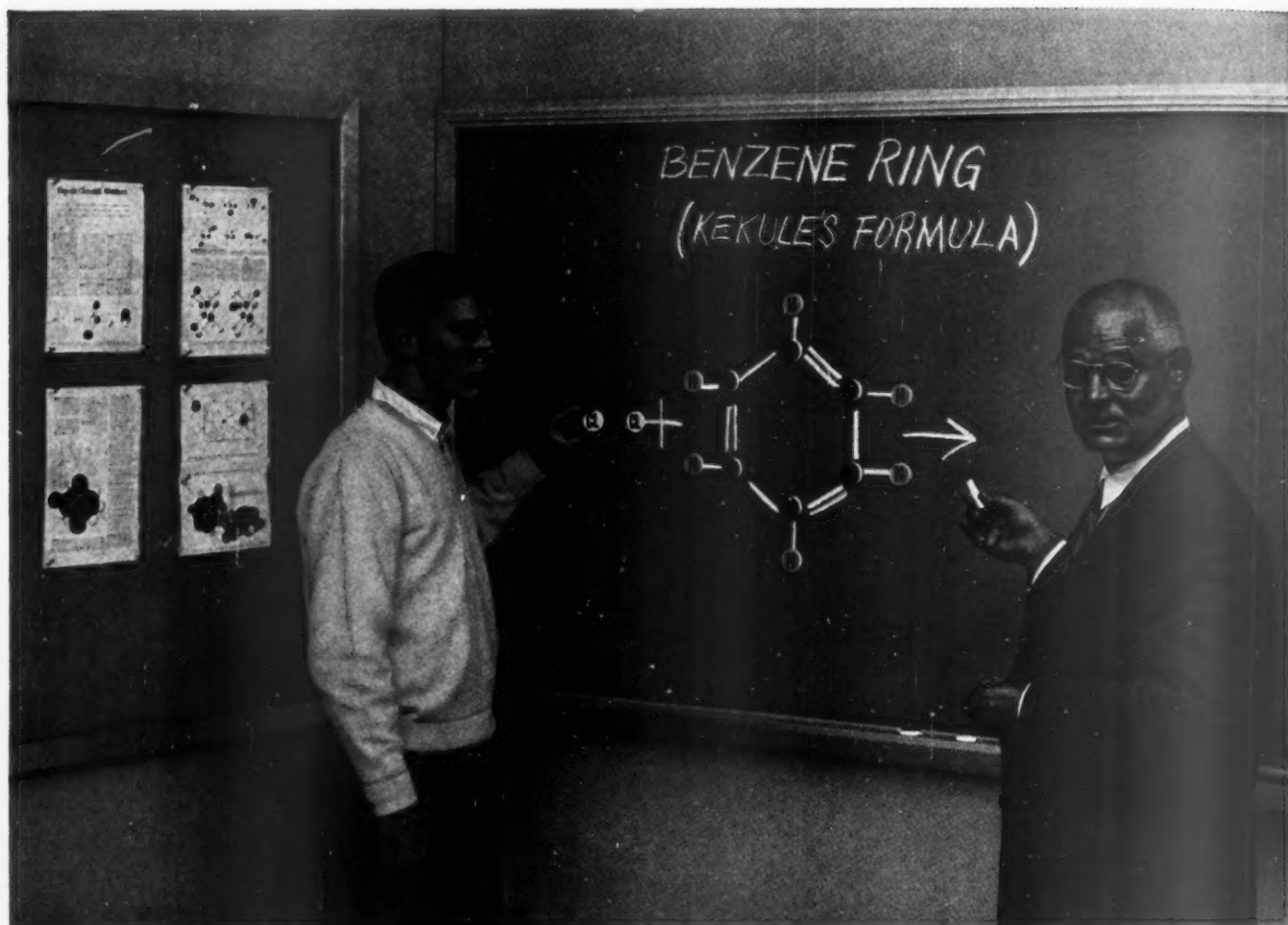


BUTLER MANUFACTURING COMPANY

7520 East 13th Street, Kansas City 26, Missouri

Manufacturers of Metal Buildings • Equipment for Farming, Dry Cleaning Oil Production and Transportation, Outdoor Advertising • Custom Fabrication
Sales offices in Los Angeles and Richmond, Calif. • Houston, Tex. • Birmingham, Ala. • Atlanta, Ga. • Kansas City, Mo. • Minneapolis, Minn. • Chicago, Ill. • Detroit, Mich. • Cleveland, Ohio • Pittsburgh, Pa. • New York City and Syracuse, N.Y. • Boston, Mass. • Washington, D.C. • Burlington, Ontario, Canada

(Circle number 719 for more information)



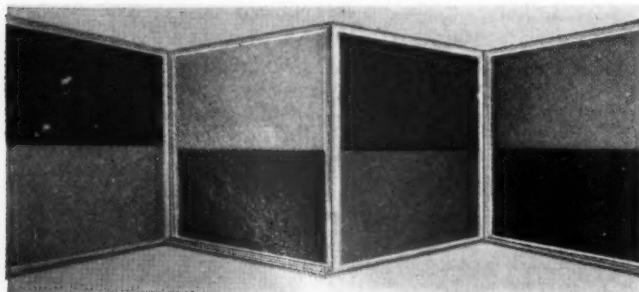
From chemistry to kindergarten cutouts, teaching can be more effective with Weldwood Chalkboard. The magnetic feature makes possible use of movable symbols attached to small magnets. Available in a variety of colors, Weldwood Chalkboard and Tackboard offer you dozens of decorating possibilities.

Catalysts for learning — and for building classroom beauty — colorful Weldwood Tackboard and magnet-holding Chalkboard

Classrooms today are not the grim, cheerless places they often were in the past. Our young people can benefit from modern facilities such as the bright — and functional — Weldwood Chalkboard and Tackboard installation pictured above. Here is an attractive setting for learning that offers the added advantages of visual aid teaching opportunities.

But to cost-conscious school planners, a Weldwood Chalkboard and Tackboard installation's most important feature is the way it cuts maintenance and saves schools money.

YOU CAN HAVE Weldwood Chalkboard and Tackboard in a wide range of matching or contrasting colors — 5 attractive Chalkboard colors; over 32 Tackboard fade-resistant colors.



Weldwood Chalkboard has a glare-free porcelain enamel face over steel that never needs resurfacing. This is bonded to exterior grade plywood and backed with .015" aluminum. Weldwood Chalkboard won't shatter or buckle, and is guaranteed for the life of the building.

Weldwood Tackboard is surfaced with Kalitex®, a tough vinyl sheet with color fused to the *underside* — keeps its fresh new look indefinitely. It wipes clean easily, takes tape or tacks without marking, and won't chip, crack, or peel.



Weldwood®

CHALKBOARD • TACKBOARD • ALUMINUM CHALKBOARD TRIM

Products of **UNITED STATES PLYWOOD CORPORATION**

In Canada: Weldwood Plywood, Ltd.

Free School Planning Booklet. "Weldwood Products for School Construction and Remodeling," has 20 pages of photographs showing Weldwood installations in schools. Write for your copy and see Weldwood products at any of 115 Weldwood branch showrooms in United States and Canada. Architects are invited to call on the Weldwood Architects' Service representative in their areas. United States Plywood Corporation, Dept. SM 11-58, 55 W. 44th St., N. Y. 36, N. Y.



(Circle number 734 for more information)